Medical Lib.

SEP 20 1927

Illinois Medical Journal

OWNED AND PUBLISHED BY THE MEDICAL PROFESSION OF ILLINOIS
Office of Publication 155 N. Ridgeland Ave., Oak Park, Illinois

Vol. LII, No. 3 OAK PARK, ILL., SEPTEMBER, 1927 $3.00 a Year

CONTENTS

Editorials (For Titles See Extended Table of Contents) 177

ORIGINAL ARTICLES

Relations of Physical Sciences to Dentistry, Medicine and Pharmacy. *G. W. Crile, M. D., Cleveland, Ohio* 200

Diseases of the Mouth, Primary and Secondary. *Thos. L. Gilmer, M. D., D. D. S., Chicago* 203

Radio-translucent Material in Laryngo-Tracheo-Bronchial Tree. *Edwin McGinnis, M. D., Chicago* 208

Nursing Situation a National Problem. *W. F. Grinstead, M. D., Cairo, Ill.* 210

Surgery of the Colon. *Charles J. Drueck, M. D., Chicago* 212

Diagnosis and Treatment of Gonorrhea in the Female. *A. M. Saunders, M. D., and Isabelle Weaver, M. D., Chicago* 217

Lethargy of Medical Profession Toward Medical Legislation. *Hon. Thos. Fekete, Jr., E. St. Louis, Ill.* 219

External Eye Diseases. *E. R. Crossley, M. D., Chicago* 221

Foreign Bodies in the Urinary Bladder. *Edward W. White, M. D., and Alf J. Holm., M. D., Chicago* 223

Tryparsamide and Mercury in 100 Cases of Neuro-Syphilis. *Geo. W. Schelm, M. D., North Chicago, Ill.* 228

Sciatic Nerve Paralysis Following Alcohol Injections. *Walter R. Fischer, M. D., Chicago* 235

Minor Injuries Re Permanent Disability. *F. P. Hammond, M. D., Chicago* 237

Continued on Page 14

Entered as Second-Class Matter July 21, 1919, at the Post Office, Oak Park, Illinois, under the Act of March 3, 1879. Acceptance for mailing at special rate of postage provided for in Section 1102, Act of October 3, 1917, authorized July 15, 1918.

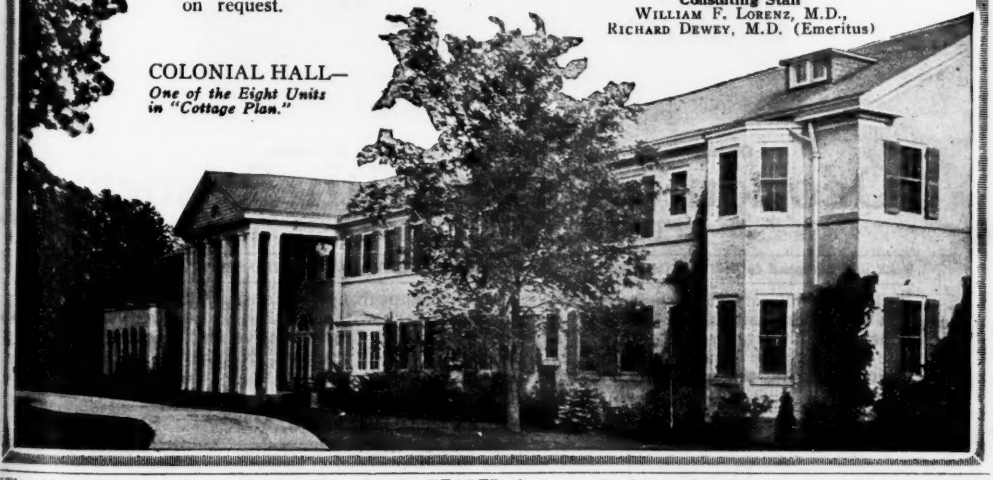
MILWAUKEE SANITARIUM
Wauwatosa, Wisconsin
(Chicago Office—1823 Marshall Field Annex. Wednesdays, 1-3 P. M.)

FOR NERVOUS DISORDERS

Maintaining the highest standards over a period of forty-two years, the Milwaukee Sanitarium stands for all that is best in the care and treatment of nervous disorders. Photographs and particulars sent on request.

Resident Staff
ROCK SLEYSTER, M.D., Med. Dir.
WILLIAM T. KRADWELL, M.D.,
MERLE Q. HOWARD, M.D.
Attending Staff
H. DOUGLAS SINGER, M.D.,
ARTHUR J. PATEK, M.D.
Consulting Staff
WILLIAM F. LORENZ, M.D.,
RICHARD DEWEY, M.D. (Emeritus)

COLONIAL HALL—
One of the Eight Units in "Cottage Plan."



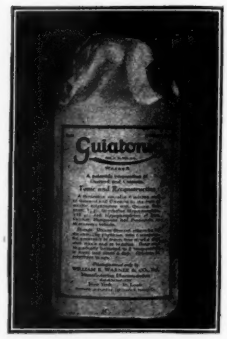
"*The Advertising Pages* have a *Service Value* for the READER that no *truly Progressive Physician can afford to overlook.*"

Promoting Convalescence

Following the acute diseases, the problem of restoring the patient to "normality"—both physical and mental—always taxes the physician's skill.

Clinical observation has shown how readily these problems can be solved by the routine and systematic use of Guiatonic.

After its administration, patients soon show a surprising restoration of appetite, with a gratifying gain in weight, strength and vitality.

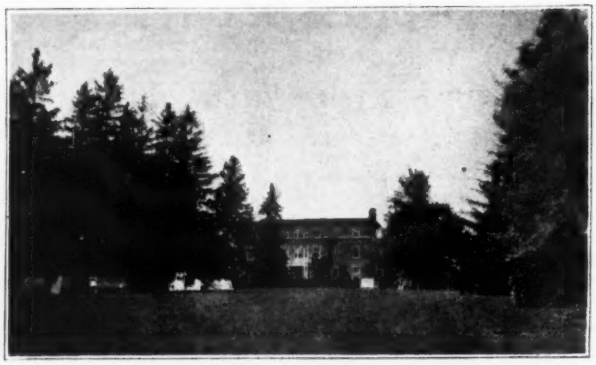


A palatable preparation of special salts of guaiacol and creosote which may be freely given to the weakest patient, without fear of gastric disturbance. ***It contains no narcotics.***

Indicated in all depressed or debilitated conditions, or whenever a tonic is required.

Guiatonic

A generous trial quantity free upon request. William R. Warner & Company, Inc., Manufacturing Pharmaceutists since 1856. 113-123 West 18th Street, New York City



On main line C. M. & St. P. Ry., 30 miles west of Milwaukee.

Oconomowoc Health Resort

OCONOMOWOC, WISCONSIN

Built and equipped in 1907 for the specific purpose of treating NERVOUS and MILD MENTAL DISEASES

Building absolutely Fireproof. Non-institutional in appearance, accommodations modern and homelike atmosphere prevails. Sixty acres of park with beautiful views over lakes. Every essential for treating nervous cases provided, including extensive baths and separate occupational departments under supervision of trained teachers. Number of patients limited assuring personal attention from the staff.

ARTHUR W. ROGERS, M.D., Physician in Charge
JAMES C. HASSALL, M.D., Medical Supt. FRED. GESSNER, M.D., Asst. Physician

ILLINOIS MEDICAL JOURNAL

THE OFFICIAL ORGAN OF

THE ILLINOIS STATE MEDICAL SOCIETY

VOL. LII | OAK PARK, ILL., SEPTEMBER, 1927 | No. 3

ILLINOIS MEDICAL JOURNAL

Published monthly by the Illinois State Medical Society under the direction of the Publication Committee of the Council.

GENERAL OFFICERS, 1926-1927

PRESIDENT .....G. HENRY MUNDT, Chicago
PRESIDENT-ELECT.....JOHN E. TUITE, Rockford
FIRST VICE-PRESIDENT.....A. T. LEIPOLD, Moline
SECOND VICE-PRESIDENT.....A. G. BOSLER, Chicago
TREASURER.....A. J. MARKLEY, Belvidere
SECRETARY.....HAROLD M. CAMP, Monmouth

THE COUNCIL

D. B. Penniman,	1st District, Rockford	1929
E. E. Perisho,	2nd District, Streator	1929
S. J. McNeill,	3rd District, Chicago	1929
J. S. Nagel,	3rd District, Chicago	1928
R. R. Ferguson,	3rd District, Chicago	1930
Wm. D. Chapman,	4th District, Silvis	1928
S. E. Munson,	5th District, Springfield	1928
Chas. D. Center,	6th District, Quincy	1930
I. H. Neece,	7th District, Decatur	1928
Cleaves Bennett,	8th District, Champaign	1929
Andy Hall,	9th District, Mt. Vernon	1930
J. S. Templeton,	10th District, Pinckneyville	1930

EDITOR

CHARLES J. WHALEN.....25 E. Washington St., Chicago

GENERAL COUNSEL

ROBERT J. FOLONIE.....231 S. La Salle St., Chicago

PUBLICATION COMMITTEE

J. W. VAN DERSLICE, *Secretary*.....
.....155 N. Ridgland Ave., Oak Park

MEDICO-LEGAL COMMITTEE

J. R. BALLINGER, *Chairman*..2724 West North Avenue, Chicago
GEORGE H. WEBER, *Secretary*.....Peoria

EDUCATION COMMITTEE

185 N. Wabash Avenue

SCIENTIFIC SERVICE COMMITTEE

JAMES H. HUTTON, *Chairman*, 6056 Cottage Grove Ave., Chicago
HAROLD M. CAMP, *Secretary*.....Monmouth

State Society will pay no bills for legal services except those contracted by the Committee. Notify the Chairman at once. Do not employ attorneys.

Send original articles and all communications relating to advertisements to Dr. Charles J. Whalen, Editor, 6221 Kenmore Avenue, Chicago. Advertising copy and cuts to 185 N. Wabash Avenue.

Membership correspondence to Dr. Harold M. Camp, Monmouth, Ill.

Society proceedings and news items and changes in the mailing list to Dr. Henry G. Ohls, Managing Editor, 1618 Juneway Terrace, Chicago.

Contributors will submit all copy for publication typewritten on standard size paper and double spaced. Copy not complying with this rule will be returned, if convenient.

Subscription price of this Journal to persons not members of the Illinois State Medical Society is $3.00 per year, in advance, postage prepaid, for the United States, Cuba, Porto Rico, Philippine Islands, Hawaiian Islands and Mexico. $3.50 per year for all foreign countries included in the postal union. Canada, $3.25. Single current copies, 35 cents. Back numbers, after three months from date of publication, 50 cents.

Editorial

THE AUTOMOBILE MORE DEADLY THAN WAR

Automobile deaths in Chicago and Cook County for the first eight months of the year 1927 was 630, breaking all previous records. The national automobile chamber of commerce says that during the last eight years enough men, women and children have been killed to populate a city the size of Nashville, Tennessee, and that in this period more deaths have been brought about by the automobile than was the total mortality list in the American forces during the world war. Between January 1, 1919, and January 1, 1927, 137,017 persons were killed in this country by automobiles, while the total deaths in our army during the world war amounted to 120,050. In the eight years mentioned 3,500,000 persons were injured in automobile accidents, and 26 per cent. of the killed and injured were children under the age of 15 years. In the year 1926 it is estimated that 23,000 persons were killed by automobiles, an increase of 1,000 over the previous year. Department of Commerce figures that fatalities in seventy-seven of the largest cities during the four weeks ending July 16, 1927, show a 7 per cent. increase over last year.

It is only when the public is confronted with statistics on the huge fatality toll of the automobile that there seems to be any disposition to stop and think. Unfortunately, however, these statistics, startling as they are, are quickly forgotten and the full effect of their significance is invariably lost.

Our country is in a state of hysteria over the destruction of life during the world war. Pacifists are flooding the country with propaganda hoping to prevent future wars, yet how little attention has been paid to the approximately 150,000 deaths caused by automobiles since the

beginning of 1919. In commenting upon this feature of the present day indifference of the public regarding automobile deaths and accidents the *New York Evening World* comments as follows: "Killing by automobile has come to be privileged." According to the same paper:

"If in the last six months 514 people had been murdered in this city, it would be conceded that society was in a state of collapse. If 514 people had been killed by subways, the entire country would be shocked at the record. If as many as 514 people had been killed by falling brick or timber where construction is in progress special legislation would be passed at once to meet the great peril. But since the 514 people killed in New York City during the last six months were killed by automobiles, we take it lightly as something to be expected."

According to the *Pittsburgh Post*, "this is a sad commentary on our state of civilization," and the *St. Louis Globe Democrat* says: "These grewsome figures should impress the individual driver with his responsibility at the wheel."

The lesson to be learned from a study of the total number of deaths is far reaching. The education of the public back to a degree of sanity in automobile driving and in other phases of our present every day life is a duty that rests upon the medical profession in a large degree. State and public officials generally are beginning to think out ways and means to lessen the unreasonable toll from traffic war. The best minds the world over are studying the problem with unflagging intensity, but nothing can be accomplished without the close co-operation of the individual motorist and here enters the pathetic feature of the situation. The individual co-operation is lacking.

Even now, with an ever growing casualty list, no concerted effort is being made to clear the streets and highways of the incompetent, the careless and the irresponsible automobile driver. In Illinois and in fact in most of the states any person, no matter how stupid, can procure a license to drive an automobile and be on his way armed with an apparatus the potentialities of which are frightful to contemplate.

Until there is a rigid tightening up all along the line, first in the granting of a license to drive an automobile; second, in checking up as to responsibility, both financial and moral, of the applicant, and thirdly, a strict and unyielding supervision over the manner in which the licensed driver runs his car, with immediate and permanent revocation in case he abuses his privilege, and lastly, the universal installation of governors on all cars which will limit the maximum speed at which a car may travel—there will be no reduction in the appalling yearly toll of the automobile.

It is time that the various states adopt stringent measures to stop the annual snuffing out of 25,000 lives and the maiming of three-quarters of a million people through automobile accidents.

IN ILLINOIS ALCOHOL FATALITIES INCREASE 500 PER CENT SINCE 1920

Mortality statistics made public by the director of the State Department of Health show that mortality in Illinois due to alcoholism has increased more than five hundred per cent since 1920.

Death due to alcoholism jumped from 47 in 1920 to 305 in 1925, while fatalities charged against cirrhosis of the liver rose from 565 to 705 during the same period.

A big increase since 1918. "In 1918, the last year before National Prohibition regulations went into effect, there were 116 deaths from alcoholism in Illinois and 690 from cirrhosis of the liver. For 1919 the mortality figures for these two disorders were 96 and 635, respectively; and for 1920 there were 47 and 565, the lowest point on record."

"Beginning with 1921, the mortality from wood alcoholism and cirrhosis of the liver has demonstrated a strong upward tendency, each year with the exception of 1923."

"Apparently alcoholic fatalities follow much faster upon the indulgence of appetite now than formerly. Drunkenness seems to be much less than during the saloon days and many of the old time Keeley cure institutions have been abandoned for lack of patients. This suggests that the wares of bootleggers are costing more than the buyers bargain for."

"The decline of mortality immediately after the Volstead law went into effect and the subsequent rise in fatality from that cause follows

closely the ways that mark the fall of the bartender and the rise of the bootlegger."

"Besides fatal termination the kind of stuff offered by bootleggers often causes serious and permanent disorder of the eyes not infrequently ending in blindness. No statistics are available on this condition, however."

"Numerous analyses of bootleg beverage have uniformly shown the presence of wood alcohol."

WOMAN'S AUXILIARY
ILLINOIS STATE MEDICAL SOCIETY

The primary function of the Woman's Auxiliary, Illinois State Medical Society, is to assist in establishing a closer feeling and a better understanding between the medical profession and the general public.

Through their clubs and societies women of physicians' families can have wholesome and educative effect upon the public for the aims and ideals of the medical profession.

Further through this auxiliary leverage can be brought to bear to secure legislation that will be beneficial to the public welfare and against the handicapping laws now being urged.

This auxiliary acts only upon the suggestion or with the approval of the Illinois State Medical Society.

It is desired to establish county units. It is the earnest hope of the primary officers that the officers of each county medical society will see to organization in their respective counties.

OFFICERS

Mrs. Henry G. Mundt, President, 4321 Normal Pkwy., Chicago, Illinois.

Mrs. W. D. Chapman, First Vice-President, Silvis, Illinois.

Mrs. Clifford C. Ellis, Second Vice-President, Moline, Illinois.

Dr. Edith B. Lowry, Third Vice-President, St. Charles Illinois.

Mrs. James H. Hutton, Corresponding Secretary, 8006 Champlain Ave., Chicago, Illinois.

Mrs. J. O. Cletcher, Recording Secretary, Tuscola, Illinois.

Dr. Hada M. Carlson, Treasurer, Moline, Illinois.

WIVES OF PHYSICIANS URGED TO BATTLE COMMUNISM

Physicians' wives are urged to aid in combating the campaign among American youth now being waged by fosterers of communism. The Daughters of the American Revolution back this fight.

Mrs. William Sherman Walker discussed the matter with physicians' wives during the recent meeting in Washington of the A. M. A.

The talk was made at a reception given by the Woman's Auxiliary of the association for Mrs. Wendell P. Phillips, wife of the retiring president of the A. M. A., and Mrs. Jabez N. Jackson, wife of the new president of the association. Addresses were given by Mrs. Albert Brosseau, President General of the Daughters of American Revolution; Mrs. F. P. Gengenbach, of Colorado, retiring president of the auxiliary, and Mrs. John O. McReynolds, of Texas, who was installed as president of the auxiliary.

Mrs. Allen H. Bunce, of Atlanta, was elected president for next year. Mrs. George H. Hoxie, of Missouri, was elected first vice-president; Mrs. Thomas A. Groover, of Washington, second vice-president; Mrs. F. A. Long of Nebraska, third vice-president; Mrs. D. W. Parker, of New Hampshire, fourth vice-president; Mrs. Willard Bartlett, of Missouri, parliamentarian, and Mrs. Irvin Abel, of Kentucky, treasurer.

HEALTH CENTERS, FREE CLINICS AND LAY DIAGNOSING AND PARTIAL PRACTICE OF MEDICINE ONE OF THE INCREASING DANGERS TO PUBLIC HEALTH

One of the most poisonous fungi emanating from attempted lay practice or dictation of the practice of medicine is the ubiquitous and prolific "health center" and "free clinic" system. Probably more harm is done at these supposed Delphic oracles of healing than by all the old time "Yarb Doctors" and "Medicine Men" put together. As it is at present managed and organized, the bulk of this work is like the false front structures in a boom town. At first glance these edifices appear to have a two-story construction. Examination shows that the front wall has merely been run up the height of a sec-

ond story with much the same assumption of dignity as appertains to a waiter wearing a "dickey" with his evening clothes.

On the same principle much of the work, if not all, that is accomplished at these "free clinics" and "health centers" is just about equally pretentious bombast. The service given is more often promise than performance.

Especially is this true of those clinics dealing with juveniles. The child is taken to the welfare clinic, examined and given advice. Rarely does the follow-up work see that this advice is taken, and very frequently, even in the case of a "follow-up," objections on the part of parents, and legally sustained objections at that, cause absolute disregard of such advice. Again where there is no "follow-up" only too often the advice never gets out of the clinic.

Cheering light on this situation comes out of Montana. There members of the Yellowstone Valley Medical Society confronted with this universal problem have been solving it in their own way and with something of satisfaction. Perhaps one cannot do better than quote from the bulletin of "Progress of the Medical Association of Montana." E. G. Balsam, M. D., under the title "Clinics," in a recent issue says:

"The members of the Yellowstone Valley Medical Society have always donated services examining children at the clinics arranged by the various welfare organizations. From the experience gained in such activities, they have made the following deductions—that the parents are very slow to avail themselves of the advice given, hence the children derive little benefit from all the work done at the clinics; after the advice is given by the doctor at the clinic the child may be taken to the family physician who may not have the same idea for the child, which gives rise to confusion in the minds of the parents and the child. For these reasons the members believe that, instead of having clinics for the examination of children, it is best to have the children taken to the family physician who will gladly do the examining and fill in the blanks required by the organizations.

"The organizations can have their meetings just the same and try to educate the parents and children in the value of periodic medical examinations of the apparently healthy by their family physicians and we believe do more good than is at present accomplished. The school or county nurse can also devote her time to the same end. There is nothing in a clinic or any other arrangement that will take the place of the active and friendly interest combined with the knowledge and skill of a family physician for the members of a family who have confidence and trust in him. That is individual service contrasted to the wholesale hurried hurrah so frequently encountered at clinics."

HEALTH CLINICS BY DRUGLESS HEALERS

One views with a quizzical smile mixed with alarm the following report of a "Health Center Show" in Los Angeles, Calif. The clipping as it came to this office reads:

The "Health Chautauqua Association" recently put on a "show" at the Philharmonic Auditorium, Los Angeles, and on the first page of its program were the names of the active members of the "Drugless Physicians of Southern California;" these individuals, it is reported, comprise the Health Chautauqua Association. McArthur Timmons is a layman employed on a salary to promote two "shows" a year, and his address, 1000 West Seventh Street, is the address of the "Health Center of Los Angeles." The "Health Center of Los Angeles" has several departments; a licensed chiropractor, J. Bruce Clark, was in charge of the "treatments;" the "Health Food Products Co." is managed by Maurice Goldman; "The Corrective Eating Cafeteria," managed by M. M. Day; "Corrective Exercises, Breathing, Physical Culture, etc." by Prof. Paul C. Bragg; "Massage," by Archie Jordan, and "Chiropractic Treatments, Baths, etc." by Emiel A. Wiseman, D. C. One-half of each department is owned by Fred S. Hirsch, who is listed as "managing director." Frank McCoy, drugless practitioner; Wesley Barrett, D. O.; Philip M. Lovell, drugless practitioner; R. Stone, D. D. S., and others were said to lecture two days a week. The "health center" places a great deal of stress, it is reported, on "Arnold Ehret's Mucusless Diet System" and the "Bio-Bloodwash Marathon Bath."

SUBSCRIBERS TO THE HISTORY OF MEDICAL PRACTICE IN ILLINOIS

The following physicians, libraries, county medical societies, etc., have sent one or more subscriptions for "The History." Kindly note any errors or corrections and forward to the committee:

ILINOIS BY COUNTIES

ADAMS COUNTY

Adams County Medical Society; Harold Swanberg, M. D., Secretary, Quincy.
Center, Charles D., M. D., 1844 Grove Ave., Quincy.
Ericson, Charles E., M. D., 205½ N. 8th St., Quincy.
Knox, T. B., M. D., Quincy.
Nickerson, Linn H., M. D., 615 Hampshire St., Quincy.
Potter, R. E., M. D., Lorraine.

ALEXANDER COUNTY

Grinstead, W. F., M. D., Halliday Hotel, Cairo.

BOND COUNTY

Powell, C. H., M. D., Pocahontas.

BOONE COUNTY

Boone County Medical Society; Dr. M. L. Hartman, Secy., Garden Prairie.
Markley, A. J., M. D., Belvidere.

BROWN COUNTY

No subscriptions.

BUREAU COUNTY

Bureau County Medical Society; F. Emerson Inks, M. D., Secy., 517 S. Main St., Princeton.

CALHOUN COUNTY

No subscriptions.

CARROLL COUNTY

No subscriptions.

CASS COUNTY

Lyles, A. R., M. D., Virginia.
McMillan, J. Chas., Jr., M. D., Virginia.

CHAMPAIGN COUNTY

Bennett, Cleaves, M. D., 418 Illinois Bldg., Champaign.
Dallenbach, J. C., M. D., Illinois Bldg., Champaign.
University of Illinois Library, Urbana.

CHRISTIAN COUNTY

No subscriptions.

CLARK COUNTY

No subscriptions.

CLAY COUNTY

No subscriptions.

CLINTON COUNTY

No subscriptions.

COLES-CUMBERLAND COUNTY

Dudley, G. B., M. D., 511 Jackson St., Charleston.
Freeman, T. O., M. D., 106 S. 16th St., Mattoon.
Swickard, C. D., M. D., 604 6th St., Charleston.

COOK COUNTY

Abt, Isaac A., M. D., 4810 Kenwood Ave., Chicago.
Andrews, Frank T., M. D., 2150 Lincoln Park West, Chicago.
Albano, Galileo, M. D., 3102 Palmer Sq., Chicago.
Alcorn, E. J., M. D., 7306 Sheridan Rd., Chicago.
Alexander, Wm., M. D., 708 Church St., Evanston.
Alumni Association College of Medicine, University of Illinois; Krasa, John M., M. D., Secretary, 3355 W. 26th St., Chicago.
Amberson, Julius M., M. D. 2705 W. North Ave., Chicago.
Ballinger, J. R., M. D., 2724 W. North Ave., Chicago.
Bassoe, Peter, M. D., 1031 Michigan Ave., Evanston.
Baxter, Geo. Edwin, M. D., 5825 Kenmore Ave., Chicago.
Baylor, Frank W., M. D., 332 S. La Salle St., Chicago.
Berg, O. H., M. D., 1101 N. California Ave., Chicago.
Berquist, Arthur V., 5411 N. Clark St., Chicago.
Billings, Frank, M. D., 1550 N. State Parkway, Chicago.
Bougher, W. S., 6706 S. Green St., Chicago.
Breakstone, Beni. H., M. D., 35 S. Hoyne Ave., Chicago.
Brown, Calvin, M. D., 143 N. Kedzie Ave., Chicago.
Brown, Frank L., 4034 W. Madison St., Chicago.
Brunning, H. F., M. D., 2004 Roscoe St., Chicago.
Cameron Surgical Specialty Co., 666 W. Division St., Chicago.
Carlson, Haldor, M. D., 4942 Milwaukee Ave., Chicago.
Chicago Medical School, 3832 Rhodes Ave., Chicago.
Chicago Medical Society, 185 N. Wabash Ave., Chicago.
Christianson, Henry, M. D., 2400 W. 63rd St., Chicago.
Cleveland, E. S., M. D., Carson, Pirie, Scott & Co., Chicago.
Cohen, Walter W., M. D., 6753 Stony Island Ave., Chicago.
Crerar Library, 86 E. Randolph St., Chicago.
Cunningham, D. H., M. D., 5726 Sheridan Rd., Chicago.
Davis, N. S., III, M. D., 460 Barry Ave., Chicago.
Davison, Charles, M. D., 432 S. Lincoln St., Chicago.
Domerocki, Paul, 2645 N. Mozart St., Chicago.
Deacon, Frank, M. D., 7531 Stony Island Ave., Chicago.
Devorak, Mildred R. N., 1044 N. Francisco St., Chicago.
Earle, C. A., M. D., Des Plaines.
Eppstein, W. G., M. D., 7042 Stony Island Ave., Chicago.
Evans, W A., Tribune Bldg., Chicago.
Ferguson, R. R., M. D., 4175 Irving Park Blvd., Chicago.
Fowler, J. V., M. D., 1263 N. Paulina St, Chicago
Frazier, H. L., M. D., 3950 N Monticello Ave., Chicago.
Frederickson, F O., M. D., 4700 Sheridan Rd, Chicago.
Friedrich, Louis H., M. D., 635 Briar Place, Chicago.
Galloway, Geo., M. D., 802 W. 31st St., Chicago.
Gaggin, Frank N., M. D., 2600 Fullerton Ave., Chicago.
Gary, S. Clark, M. D., 253 W. 22nd St., Chicago.
Geiger, Arthur H., M. D., 554 Fullerton Pkwy., Chicago.
Gibbs, John Philip, M. D., 2750 Fullerton Ave., Chicago.
Goldberger, S. M., M. D., 3153 Fullerton Ave., Chicago.
Gould, H. V., M. D., 1214 Berwyn Ave., Chicago.
Greenspan, Jacob, 2641 W. Division St., Chicago.
Haeberlin, John B., M. D., 5 E. Garfield Blvd., Chicago.
Hanshus, J. W., M. D., 2218 N. California Ave., Chicago.
Harger, John R., M. D., 544 N. Kenilworth Ave., Oak Park
Harris, M. L., M. D., 25 E. Washington St., Chicago.
Heineck, Aime Paul, M. D., 4721 Greenwood Ave., Chicago.
Hibbs, W. G., M. D., 952 N. Michigan Ave., Chicago.
Hershfield, A. S., M. D., 25 E. Washington St., Chicago.
Hodes, J. E., M. D., 3153 N. California Ave., Chicago.
Hoffman, Frank F., M. D., 2514 Smalley Ct., Chicago.
Hopkins, C. W., M. D., 904 Michigan Ave., Evanston.
Hopkins, Percy E., M. D., 800 W. 78th St., Chicago.
Hubeny, M. J., M. D., 25 E. Washington St., Chicago.
Huber, O. C., M. D., 6 So. Keedzie Ave., Chicago.
Hultgen, J. F., M. D., 1518 W. Garfield Blvd., Chicago.
Humiston, Chas. E., M. D., 449 N. Central Ave., Chicago.
Hutton, James H., M. D., 6054 Cottage Grove Ave., Chicago.
Illinois State Medical Society Educational Committee, 185 N. Wabash Ave., Chicago.
Jackson, E. W., M. D., 112 N. Kedzie Ave., Chicago.
Johnston, Lester S., M. D., 2757 Fullerton Ave, Chicago.
Johnson, Warren, M. D., 1356 N. Kedzie Ave., Chicago.
Jones, A. D., M. D., 2211 N. Tallman Ave., Chicago.
Jones, Jay G., M. D, 3359 N. Halsted St., Chicago.
Kanaval, Allen B., M. D., 54 E. Erie St., Chicago.
Keating, Emmet, M. D., 2758 Fullerton Ave., Chicago.
King, C. B., M. D., 113 N. Homan Ave., Chicago.
Krafft, J. C., M. D., 3038 Palmer Square, Chicago.
Kretschmer, Herman, M. D., 122 S. Michigan Ave., Chicago.
Kreuscher, Philip, M. D., 30 N. Michigan Ave., Chicago.
Laftry, T. D., M. D., 3207 W. Washington Blvd., Chicago.
Larson, E. N., M. D., 3824 Fullerton Ave., Chicago.
Lee, Newton D., M. D., 4753 Broadway, Chicago.
Medical Protective Co., 35 E. Wacker Drive, Chicago.
Meyer, J. T., M. D., 7852 S. Halsted St., Chicago.
McNeill, S. J., M. D., 5339 Magnolia Ave., Chicago.
Middleton, May E., 935 S. Homan Ave., Chicago.
Miller, Geo. H., M. D., 3500 N. Kimball Ave., Chicago.
Miller, Joseph L., M. D., 5315 Greenwood Ave., Chicago.
Monaco, D. F., M. D., 1400 W. 69th St., Chicago.
Monahan, James John, M. D., 1140 E. 46th St., Chicago.
Morton, Frank R., M. D., 910 S. Michigan Ave., Chicago.
Mueller, E. W., M. D., 1354 Devon Ave., Chicago.
Mueller, V. & Co., 1779 Ogden Ave., Chicago.
Mundt, G. Henry, M. D., 432 Normal Pkwy., Chicago.
Nagel, John, M. D., 124 N. Menard Ave., Chicago.
National Pathological Laboratory, 5 S. Wabash Ave., Chicago.
Noble, Wm. L., M. D., 31 N. State St., Chicago.
Northwestern Medical School Library, 303 E. Chicago Ave., Chicago.
Noskin, Harry, M. D., 2027 Pierce Ave., Chicago.
Norwegian American Hospital, 1044 N. Francisco Ave., Chicago.
Novak, Frank J., Jr., M. D., 30 N. Michigan Ave., Chicago.
O'Bryne, Charles C., M. D., 7 W. Madison St., Chicago.
Ochsner, Edward H., M. D., 2155 Cleveland Ave., Chicago.
O'Conor, Vincent J., M. D., 30 N. Michigan Ave., Chicago.
Oyen, Albert N., M. D., 2539 Kedzie Blvd., Chicago.
Packard, Rollo K., 826 E. 61st St., Chicago.
Patten, Fred P., M. D., 710 Greenwood Ave., Glencoe.
Percy, Nelson, M. D., 2100 Lincoln Park West, Chicago.
Peterson, Wm. F., M. D., 1322 Astor St., Chicago.
Pflock, John J., M. D., 2130 California Ave., Chicago.
Phifer, Frank S., M. D., 6156 Evans Ave., Chicago.
Pirnet, Ferd H., M. D., 2422 Smalley Ct., Chicago.
Plummer, S. C., M. D., 4539 Oakenwald Blvd., Chicago.
Przygocki, S. F., M. D., 2804 Logan Blvd., Chicago.
Portis, M. M., M. D., 104 S. Michigan Ave., Chicago.
Pusey, Wm. Allen, M. D., 7 W. Madison St., Chicago.
Radiological Review and Chicago Medical Recorder, 81 E. Madison St., Chicago.
Rogers, Cassius C., M. D., 25 E. Washington St., Chicago.
Rudnick, Dorrin F., M. D., 7 W. Madison St., Chicago.
Rush Medical College Library, Wood and Harrison Sts., Chicago.
Schell, Charles P., M. D., 3462 W. North Ave., Chicago.

Schmidt, Charles L., M. D., 1556 W. 69th St., Chicago.
Schmidt, Otto L., M. D., 1547 N. Dearborn Pkwy., Chicago.
Schmitz, Henry, M. D., 3051 Logan Blvd., Chicago.
Searle, G. D. & Company, 4737 Ravenswood Ave., Chicago.
Smith, Ben R., M. D., 4949 N. Central Park Ave., Chicago.
Sondel, Louis C., 4454 N. Robey St., Chicago.
Sonnenschein, Robert, M. D., 4518 Woodlawn Ave., Chicago.
Stec, Mr. Andrew, 2205 Walton Ct., Chicago.
Stone, David G. (attorney), 127 N. Dearborn St., Chicago.
Taylor, J. H., M. D., 446 Pine Ave., Chicago.
Thorek, Max, M. D., 850 Irving Park Blvd., Chicago.
Thornton, F. E., M. D., 2605 Milwaukee Ave., Chicago.
Tir, M. I., M. D., 2559 W. North Ave., Chicago.
Torrison, Geo. A., 2338 N. Kedzie Ave., Chicago.
Trostler, I. S., M. D., 25 E. Washington St., Chicago.
University of Chicago Press, 5750 Ellis Ave., Chicago.
Vehe, K. L., M. D., 1943 Lunt Ave., Chicago.
Vilna, B. L., M. D., 5539 W. 22d St., Chicago.
Walsh, J. H., M. D., 112 N. Kedzie Ave., Chicago.
Warden, Ralph, M. D., Norwegian American Hospital, Chicago.
Weaver, Geo. H., M. D., 629 S. Wood St., Chicago.
Webster, Geo. W., M. D., 30 N. Michigan Ave., Chicago.
Wedel, Gustav, M. D., 2448 W. Division St., Chicago.
Whalen, C. J., M. D., 6221 Kenmore Ave., Chicago.
Whamond, Fred G., M. D., 4250 Gladys Ave., Chicago.
Wheeler, Ralph, M. D., 108 N. State St., Chicago.
Wienecke, C. H., M. D., 3225 Lawrence Ave., Chicago.
Wiley, Charles R., M. D., 184 N. Racine Ave., Chicago.
William T. J., M. D., University Bldg., Evanston, Ill.
Williamson, Charles Spencer, M. D., 1517 Dearborn Pkwy., Chicago.
Zaczeck, H. M., M. D., 239 E. 51st St., Chicago.
Ziegler, L. C. H. E., M. D., 6114 Kenmore Ave., Chicago.

CRAWFORD COUNTY

Ferguson, R. A., M. D., Bellair.
Price, C. E., M. D., Robinson.
Rafferty & Lowe, Robinson Hospital, Robinson.

DE KALB COUNTY

De Kalb Public Hospital, De Kalb.
Neff, Emery B., M. D., De Kalb.
Rankin, James S., M. D., 149 E. Lincoln Highway, De Kalb.
Smith, Clifford E., M. D., 261 E. Lincoln Highway, De Kalb.

DE WITT COUNTY

Marvel, J. G., M. D., Waynesville.

DOUGLAS COUNTY

Cletcher, J. O., M. D., Tuscola.
Conn, H. G., M. D., Newman.

DU PAGE COUNTY

Oelke, E. H., M. D., Wheaton.

EDGAR COUNTY

No subscriptions.

EDWARDS COUNTY

No subscriptions.

EFFINGHAM COUNTY

Burkhardt, C. F., M. D., 405 E. Jefferson St., Effingham.
Lorton, Samuel, M. D., Shumway.

FAYETTE COUNTY

No subscriptions.

FORD COUNTY

No subscriptions.

FRANKLIN COUNTY

Lane, C. O., M. D., 115 E. Main St., W. Frankfort.
J. B. Moore, M. D., Benton.

FULTON COUNTY

Betts, G. S., M. D., R. F. D. 5, Canton.
Coleman, E. P., M. D., 24 N. Main St., Canton.

GALLATIN COUNTY

No subscriptions.

GREEN COUNTY

Garrison, W H., M. D., 113 N. Main St., Whitehall.

HAMILTON COUNTY

No subscriptions.

HANCOCK COUNTY

Cooper, Earl, M. D., Augusta.
Irwin, W. L., M. D., Plymouth.
Drs. Mead & Mead, Augusta.

HARDIN COUNTY

No subscriptions.

HENDERSON COUNTY

No subscriptions.

HENRY COUNTY

Drennan, G. D., M. D., Woodhull.
Geneseo Public Library, Geneseo.

IROQUOIS COUNTY

No subscriptions.

JACKSON COUNTY

No subscriptions.

JASPER COUNTY

No subscriptions.

JEFFERSON COUNTY

Hall, Andy, M. D., Mt. Vernon.

JERSEY COUNTY

No subscriptions.

JO DAVIESS COUNTY

No subscriptions.

JOHNSON COUNTY

No subscriptions.

KANE COUNTY

Jacobs, Milton, M. D., 366 Dundee Rd., Elgin.
Lowry, Edith B., M. D., St. Charles.
Maha, Frank, M. D., Dundee.
Pelton Clinic, 102 N. Spring St., Elgin.
Roach, D. C., M. D., Burlington.

KANKAKEE COUNTY

Kankakee City Medical Society; Anson Le Roy Nickerson, Secy., Kankakee.
Phipps, O. A., M. D., Manteno.

KENDALL COUNTY

Lord, Arthur E., M. D., Plano.

KNOX COUNTY

Baird, B. W., M. D., Weinberg Arcade, Galesburg.
Galesburg Public Library, Galesburg.
Maley, W. H., M. D., 44 N. Cherry St., Galesburg.

LAKE COUNTY

American Journal of Clinical Medicine Library, North Chicago.
Ross, J. A., M. D., Wauconda.

LA SALLE COUNTY

Medical Library Hygienic Institute; Arlington Ailes, M. D., Director, La Salle.
Perisho, E. E., M. D., Streator.
Pettit, J. W., M. D., Ottawa.

LAWRENCE COUNTY

Kirkwood, Tom, M. D., 1425 Jefferson Ave., Lawrenceville.
Mangum, W. R., M. D., 403 Main St., Bridgeport.

LEE COUNTY

Avery, W. M., M. D., Pawpaw.
Chandler, A. W., M. D., City Nat'l Bank Bldg., Dixon.
Lee County Medical Society, 113 Galena Ave., Dixon.
Murphy, E. S., M. D., Dixon Nat'l Bank Bldg., Dixon.

LIVINGSTON COUNTY

Shafer, H. L., M. D., Cornell.

LOGAN COUNTY

Logan County Medical Society, E. C. Gaffney, M. D., Secy., Lincoln.

McDONOUGH COUNTY

No subscriptions.

McHENRY COUNTY

Baccus, Clyde F., M. D., Woodstock Nat'l Bank Bldg., Woodstock.
Johnson, C. M., M. D., 206 E. Front St., Harvard.
Maxon, J. G., M. D., Harvard.

McLEAN COUNTY

Fox, Ralph, M. D., 905 N. East St., Peoria.
Sloan, E. P., M. D., Bloomington.
Sloan, Deneen & Sloan, Bloomington.

MACON COUNTY

Frech, L. O., M. D., Decatur.
Neece, I. H., M. D., Standard Life Bldg., Decatur.

MACOUPIN COUNTY

English, J. N., M. D., Gillespie.
Goff, Arthur C., 1020 W. Main St., Staunton.
Macoupin County Medical Society; T. D. Doan, M. D., Secy., Elmira.

MADISON COUNTY

Luster, R. D., M. D., 1924 E. St., Granite City.
Madison County Medical Society; E. W. Fiegenbaum, Secy. Edwardsville.
Monroe, D. D., M. D., Edwardsville.
Pfeiffenberger, Mather, M. D., 763 Bluff St., Alton.
Robertson, A. P., M. D., 102 W. 3rd St., Alton.
Schroeder, Hugo C., M. D., 1927 E. St., Granite City.

MARION COUNTY

No subscriptions.

MASON COUNTY

Corry, F. J., M. D., Havana.

MASSAC COUNTY

No subscriptions.

MENARD COUNTY

Brittin, A. L., M. D., Athens.

MERCER COUNTY

No subscriptions.

MONROE COUNTY

No subscriptions.

MONTGOMERY COUNTY

Montgomery County Medical Society; H. F. Bennett, M. D., Secy., Litchfield.

MORGAN COUNTY

Black, Carl E., M. D., Ayers Bank Bldg., Jacksonville.
Dollear, A. H., M. D., 1631 Mound Ave., Jacksonville.
Hardesty, F. O., M. D., 336 W. State St., Jacksonville.
Norris, Frank A., M. D., Pacific Hotel, Jacksonville.

MOULTRIE COUNTY

No subscriptions.

OGLE COUNTY

Beveridge, J. M., M. D., Oregon.
Bogue, A. R., M. D., Rochelle.
Price, Charles, M. D., 2202 Brayton Ave., Mt. Morris.

PEORIA COUNTY

Barber, E. E. & Orville, M. D., 627 Jefferson Bldg., Peoria.
Crooks, A. A., M. D., 428 Main St., Peoria.
Easton, S. H., M. D., Jefferson Bldg., Peoria.
Green, Roland L., M. D., Central National Bank, Peoria.
Horwitz, S., M. D., Central Nat'l Bank Bldg., Peoria.
Levitan, Emil Z., 616 Jefferson Bldg., Peoria.
Peoria City Medical Society, 532 Jefferson Ave., Peoria.
Smith, S. A., M. D., Chillicothe.
Sprenger, Arthur, M. D., Jefferson Bldg., Peoria.
Thomas, E. C., M. D., Chillicothe.
Will, O. B., M. D., 204 Randolph St., Peoria.

PERRY COUNTY

Templeton, J. S., 115 N. Main St., Pinckneyville.
Stevens, H. S., M. D., Tamaroa.

PLATT COUNTY

No subscriptions.

PIKE COUNTY

Barry Public Library, Barry. Donated by Drs. Wm. Kuntz, R. H. Main, T. D. Taylor and W. G. Reynolds.
Loveless, Harry C., M. D., Griggsville.
Shastid, W. E., M. D., 310 N. Monroe St., Pittsfield.

POPE COUNTY

No subscriptions.

PULASKI COUNTY

No subscriptions.

RANDOLPH COUNTY

No subscriptions.

RICHLAND COUNTY

No subscriptions.

ROCK ISLAND COUNTY

Beam, H. A., M. D., 506 15th St., Moline.
Chapman, W. D., M. D., 136 9th St., Silvis.
Hardinger, R. W., M. D., 1509½ 7th St., East Moline.
Hauberg, G. D., M. D., Moline Trust Bldg., Moline.
Johnson, G. F., M. D., 840½ 15th Ave., East Moline.
Leipold, A. T., M. D., 1417½ 5th Ave., Moline.
Ostrom, L., M. D., First Trust Bldg., Rock Island.
Otis, F. J., M. D., 1514 5th Ave., Moline.
Seids, J. W., M. D., Reliance Bldg., Moline.

ST. CLAIR COUNTY

Boyle, W. W., M. D., Murphy Bldg., East St. Louis.
Otrich, G. S., M. D., Commercial Bldg., Belleville.
Skaggs, Charles S., M. D., 513 Missouri Ave., East St. Louis.
Belleville Branch, St. Clair County Medical Society, Belleville.
Wilhelmj, Walter, M. D., Murphy Bldg., East St. Louis.

SALINE COUNTY

Hicks, John, M. D., Eldorado.

SANGAMON COUNTY

Deal, Don, M. D., First Nat'l Bank Bldg., Springfield.
De Freitas, J. A., 111½ N. 5th Ave., Springfield.
Illinois State Dept. of Health, State House, Springfield.
Illinois Tuberculosis and Public Health Assn., 516½ East Monroe St., Springfield.
MacNamara, H. P., M. D., Illinois Nat'l Bank, Springfield.
Munson, Samuel E., M. D., Leland Bldg., Springfield.
Neal, John R., M. D., 609 Walnut St., Springfield.
Nelson, C. S., M. D., 804 Park Ave., Springfield.
Owen, Milton G., M. D., 1621 S. 6th St., Springfield.
Palmer, Geo. Thomas, M. D., Leland Office Bldg., Springfield.
Taylor, L. C., M. D., Springfield.

SCHUYLER COUNTY

No subscriptions.

SCOTT COUNTY

No subscriptions.

SHELBY COUNTY

Hulick, C. H., M. D., Shelbyville.

STARK COUNTY

McMackin, C. C., M. D., Wyoming.

STEVENSON COUNTY

Arnold, B. A., M. D., 320 N. Galena Ave., Freeport.
Rideout, W. J., M. D., State Bank Bldg., Freeport.
Salter, Allen, M. D., Lena.

TAZEWELL COUNTY

Zinser, H. A., M. D., Washington.

VERMILION COUNTY

Coolley, E. B., M. D., The Temple, Danville.
Wilkinson, C. E., M. D., The Temple, Danville.

WABASH COUNTY

No subscriptions.

WARREN COUNTY

Camp, Harold M., M. D., Monmouth.
Clarke, Geo. W., M. D., Roseville.
Kampen, H. L., M. D., 108 E. 1st Ave., Monmouth.
Warren County Public Library, Monmouth.
Winters, F. C., M. D., Lynch Bldg., Monmouth.

WASHINGTON COUNTY

No subscriptions.

WAYNE COUNTY

No subscriptions.

WHITE COUNTY

No subscriptions.

WHITESIDE COUNTY

Whiteside County Medical Society; L. S. Reavley, M. D., Secy., Sterling.

WILL-GRUNDY COUNTIES

No subscriptions.

WILLIAMSON COUNTY

No subscriptions.

WINNEBAGO COUNTY

Johnson Clinic, Rockford.
Penniman, David B., M. D., 1718 Camp Ave., Rockford.
Tuite, John, M. D., 230 Church St., Rockford.

WOODFORD COUNTY

Woodford County Medical Society; S. M. Burdon, M. D., Secy., Low Point.

SUBSCRIBERS FROM OTHER STATES

CALIFORNIA

Bridge, Norman, M. D., 718 Adams St., Los Angeles.
Percy, James F., M. D., 1030 S. Alvarado St., Los Angeles.

COLORADO

Boyd, Geo. Arnold, M. D., Exchange Nat'l Bank Bldg., Colorado Springs.
Denver City and County Medical Society Library, 1620 Court place, Denver.

CONNECTICUT

Woodruff, Thos. A., M. D., Mercer Bldg., New London.

GEORGIA

Medical Association of Georgia, 139 Forrest Ave. N. E., Atlanta.

IDAHO

Idaho State Medical Association; Dr. J. N. Davis, Kimberly.

INDIANA

Eli Lilly & Co., Indianapolis.
Pitman Moore Co., 1220 Madison Ave., Indianapolis.

IOWA

Iowa State Medical Society Library, Historical Bldg., Des Moines.

MASSACHUSETTS

Boston Medical Library, 8 Fenway, Boston.

MICHIGAN

Michigan University, Gen'l & Medical Library, Ann Arbor.
Sheehan, John V. & Company, 1550 Woodward Ave., Detroit.

MINNESOTA

Mayo Clinic, Rochester.

MISSOURI

St. Louis Medical Society Library, 3525 Pine St., St. Louis.

NEW JERSEY

Cummins, G. Wyckoff, M. D., Belvidere.

NEW YORK

Davis & Geck, Duffield St., Brooklyn.
Library of New York Academy, 2 W. 103d St., New York City.

NORTH DAKOTA

Grassick, James, M. D., Grand Forks.

OHIO

Cleveland Medical Library Assn., 11000 Euclid Ave., Cleveland.
Fischer, Martin H., M. D., College of Medicine, Eden Ave., Cincinnati.

PENNSYLVANIA

Luzerne County Medical Library, 130 S. Franklin St., Wilkes-Barre.

WISCONSIN

Davis, Carl Henry, M. D., 141 Wisconsin St., Milwaukee.

FROM CANADA

Ahern, Geo., M. D., Laval University, Quebec.

Volume two will follow soon. Orders should be sent to the Committee on Medical History, Illinois State Medical Society. For convenience the following order blank and data are printed:

THE HISTORY OF MEDICAL PRACTICE IN THE STATE OF ILLINOIS

IN TWO VOLUMES

Sold on Subscriptions

AUTHORIZED BY ILLINOIS STATE MEDICAL SOCIETY

To the Committee on Medical History
Illinois State Medical Society
c/o Cashier
The Bowmanville National Bank
4806 North Western Ave., Chicago, Ill.

Please send.....copies of "THE HISTORY OF MEDICAL PRACTICE IN ILLINOIS" (Parcel Post, Express) for which I will pay at the rate of Ten Dollars ($10.00) two volumes to address below. Enclosed and payable to The Illinois State Medical Society Historical Committee is (Draft, Express Order, Cheque, Money Order) for.....Dollars. ($.....).

Signed .....

Street No. .....

City or Town.....

State .....

PHYSICIANS IN SMALL TOWN WILL PRESENT HISTORY TO LIBRARY

A rather unique method of purchasing the History of Medical Practice in Illinois has just come to our notice. The four physicians of Barry, Illinois, have joined together to purchase a volume. When they are through reading it, they expect to donate the work to their public library. The four physicians of that city are Doctors W. W. Kuntz, R. H. Main, T. D. Taylor and W. G. Reynolds.

By presenting the History to the library, it will be preserved for future reference so that the citizens of that community will have the opportunity to get much historical data not available otherwise in small libraries.

We are pleased to report this plan, as it may be of value to other physicians in small cities where a similar plan might be adopted so that the people of their community may have access to this valuable work.

SOCIAL WORKERS, ECONOMISTS, FOUNDATION DIRECTORS, NEAR DOCTORS, AND A FEW MEDICAL MEN TO PASS ON EFFICIENCY OF MEDICAL SERVICE IN THE UNITED STATES

THE GROUP DISCUSSED PLANS THAT MAY REVOLUTIONIZE AMERICAN MEDICINE

Plans have been formulated in May at Washington, D. C., to survey the entire field of medical practice in the United States. While views on the subject were intended to be confidential it is apparent that the object is to determine by investigation whether at present medical practice is carried on economically, and is adequately and effectively administered.

Call for this conference was made as a matter of convenience while the American Medical Association was in session and *was entirely outside of the program of the A. M. A.*

As we interpret it, the intention of the organization is to find out whether the prevention and cure of disease are conducted on lines that are thoroughly sound, or whether in any important direction there is need for fundamental changes of method. The program launched by this conference may lead to revolutionary developments.

Two sessions of the organization were held. About fifty individuals were present. Meetings were at the offices of the American Red Cross Society.

The following were among those present:

Dr. Winford H. Smith, director of Johns Hopkins Hospital, Baltimore; Dr. Charles E. A. Winslow, professor of public health at the Yale Medical School; Dr. H. H. Moore, educational director, United States Public Health Service, Washington; Dr. Louis I. Harris, Health Commissioner of New York City; John A. Kingsbury, secretary of the Milbank Memorial Fund, New York; Dr. John Shelton Horsley, surgeon, of Richmond, Va.; Walton H. Hamilton, of the Brookings School of Economics, Washington; Dr. E. L. Bishop, State Health Commissioner of Tennessee; Dr. James B. Bruce, director of the Department of Internal Medicine at the University of Michigan; George E. Barnett, professor of statistics, Johns Hopkins University; Richard M. Broadley, of the Thompson Foundation, Boston; Surgeon General Hugh S. Cumming, of the United States Public Health Service; Dr. Haven Emerson, professor of public health administration, Columbia University; Miss Blanche M. Haines, of the Children's Bureau, Department of Labor, Washington; Dr. Shelby M. Harrison, vice general director of the Russell Sage Foundation; Dr. A. T. McCormack, State Health Commissioner of Kentucky; W. F. Willoughby, director Institute for Government Research, Washington; Dr. M. C. Winternitz, dean of Yale Medical School; Dr. Eugene R. Whitmore, professor of parasitology and pathology, Georgetown University.

Dr. David Reisman, professor of clinical medicine, University of Pennsylvania; Dr. Homer N. Calver, executive secretary of American Public Health Association; Dr. Louis I. Dublin, Metropolitan Life Insurance Company; Miss Hildegarde Kneeland, Bureau of Home Economics, Washington; Dr. S. W. Welch, State Health Commissioner of Alabama; James A. Tobey, Borden Milk Company; Dr. Leo Wolman, of the National Bureau of Economic Research, New York; Edward A. Woods, of the Equitable Life Assurance Society; Dr. C. C. Pierce, director of Western division, United States Public Health Service, and Dr. Waller S. Leathers, Vanderbilt University.

The Washington conferences considered the effects of the practice of medicine, as now conducted in the United States. This subject is as broad as the field of medical science, is almost limitless in its scope, and naturally would include the influence on public health of agencies such as the Rockefeller and Russell Sage foundations, and of similar institutions functioning under enormous endowments, and also the present day problem of hospitalization, and of whether hospitals should show state ownership maintenance and operation on an increasing ratio.

In the contemplated survey, the vital issue of the nursing system is to be investigated. Under the proposed plan a thorough investigation is to be made of the roles at present being played in the realm of public health by colleges and universities, private medical schools, dispensaries, and industrial organizations which employ doctors and nurses for the care of their own staffs. The part played by individual physicians, surgeons and specialists of all kinds will of course come in for penetrating examination.

In the completion of the organization a committee of five was named and vested with authority to select thirteen additional members to consist of representatives of colleges, universities, and foundations in the hope that the latter would furnish the necessary sinews to carry on. This would amount to approximately forty thousand dollars for the first year and a larger sum for succeeding years. It was estimated that it would take five years to make the survey. The five members selected to start the machinery going are Dr. Barker of Johns Hopkins; Prof. Winslow of Yale; Dr. Smith of Johns Hopkins Hospital; Dr. Moore of United States Public Health Service, and Michel Davis, representing medical foundation of New York.

CHIROPRACTORS CREATE A DESPERATE SITUATION FOR OHIO DOCTORS

Legal Action Promised Against Officers of Ohio State Medical Association.

Chiropractors to Have State Wide Referendum

We are in receipt from the secretary of the Ohio Medical Association Bulletin No. 9 which indicates that things look rather desperate for the medical fraternity in Ohio. The bulletin

shows conclusively that the medical men of Ohio have not attempted to organize as carefully as they should. Below is an abstract of the Bulletin.

CHIROPRACTIC ACTIVITIES AND DEVELOPMENTS ON INITIATED BILL TO DATE

There have been certified to date to the Secretary of State's office reports from 37 county boards of elections on the chiropractic initiative and supplementary petitions.

The total number of signatures certified from these 37 counties is now 70,608 and a total of only 2,355 have been rejected by those boards of elections as "insufficient" following court action on those petitions.

As only approximately 120,000 signatures are required in the entire state on the initiative and supplementary petitions to secure a vote on this issue, a continuation of the present average will show sufficient signatures for that purpose.

Reference was made in a previous bulletin (Special Bulletin 5, of July 6) the action of the Putnam County Medical Society in sending a communication to the signers of the chiropractic petitions in that county, in reference to the proposed bill. According to information coming to this office, an unlicensed chiropractor has sworn out a warrant for the arrest of the officers of that County Medical Society. The following paragraphs are quoted from an Associated Press on this subject:

"Ben L. Miles, Westerville, representing the chiropractors, filed the affidavits for arrest of the medical trio. His warrant charged that the State Medical Association through officers whose names were signed to a circular only as a committee, sent out a circular designed to adversely affect chiropractors.

"Miles declared today similar action will be instituted against the Ohio Medical Association officers in every county in the state."

This demonstrates the extremes to which the chiropractors intend to proceed in their misleading propaganda on behalf of their initiated bill. The warrant against the officers of the Putnam County Medical Society will undoubtedly be dismissed, it constitutes an unjustified attack upon the medical profession.

According to further word coming to this office, a series of district meetings have been started by the chiropractors in which their spokesmen have declared that any activities to defeat their proposal will be met by a similar activity. They have also planned to raise a campaign fund by an assessment of $300.00 against every chiropractor in the State. They set as a minimum for their campaign fund in each county, the sum of $2500.00. According to our best information, those who are contributing to the chiropractic cause, are mostly "unlicensed" chiropractors who may consider their contribution as a "quid pro quo" in return for an expected license to be issued to them under the chiropractic board which they hope to have created under the proposed initiated bill.

One county medical society has already started the creation of an educational fund to meet the chiropractic issue and other similar problems. A nominal assessment of $10.00 per member is contemplated for printing, posters, publicity and other activities as suggested in the "Proposed Plan" which accompanied Bulletin 1 and Bulletin 8.

Within the past few days, considerable misleading chiropractic propaganda has appeared in some of the newspapers, which indicates the importance of "educating" newspaper publishers and editors as suggested in previous bulletins and on the facts as summarized in the last and preceding bulletins.

The Policy Committee of our State Society has been constantly busy with conferences and plans in cooperation with other allied groups in opposition to the initiated bill. Your comments, suggestions and information will be appreciated.

VOLUNTEER HEALTH AGENCIES AND MEDICAL ORGANIZATIONS SHOULD PROMOTE A BETTER WORKING ARRANGEMENT

The *New York State Journal of Medicine* has the following to offer in the way of promoting closer relations between medical organizations and voluntary health agencies:

It is fully recognized that County Medical Societies and county and other local voluntary health agencies are fully autonomous, and that no direction nor control over them can be exercised by state-wide organizations. In order, however, that the results indicated above, as being desirable, may be as fully secured as possible, it is believed that certain suggestions may appropriately be submitted for consideration to local health agencies and medical societies, action on their part of course being strictly optional.

It is believed that effective relations in the public

interest will be promoted if voluntary health agencies on their part will include the following steps in their program:

(a) Invite the County Medical Society to designate a certain number of its members, say two, to become members ex-officio of its board of directors or executive committee, if there be one.

(b) Lay its annual program of activities before the County Medical Society for information and suggestions.

(c) Appoint a special committee to confer with a similar special committee appointed by the County Medical Society about matters that come up from time to time in which both groups are mutually interested.

(d) Report to the parent body of the voluntary health agency any matter as to which an accord has not been reached with the County Medical Society, in the hope that through conference between the parent body of the voluntary health agency and the State Medical Society any such matter may be negotiated and adjusted to the mutual satisfaction of all concerned.

(e) Conduct at least one open meeting each year to which the members of the County Medical Society are specially invited.

It is believed that these desirable results will also be furthered if the County Medical Society will include the following in its program:

(a) Accept the invitation from the voluntary health agency to designate certain of its members to serve as members ex-officio on the board of directors or executive committee of the voluntary health agency.

(b) Study and consider any program of activities that may be referred to it by the voluntary health agency for information and suggestions; and, if such program is approved, make a public statement to that effect, and otherwise support the program so approved.

(c) Appoint a special committee on public relations to confer from time to time with similar committees appointed by the voluntary health agency on matters of mutual interest to both agencies.

(d) Report to the State Medical Society any matter as to which an accord has not been reached with the voluntary health agency, in the hope that through conference between the State Medical Society and the parent body of the voluntary health agency any such matter may be negotiated and adjusted to the mutual satisfaction of all concerned.

THE MEDICAL VETERANS UNITE WITH THE MILITARY SURGEONS. MEDICAL MEMBERS OF DRAFT BOARDS ARE NOW ELIGIBLE

That the union is desirable for reasons well stated by General M. W. Ireland, Surgeon General of the Army, in an address delivered in Philadelphia at the annual meeting of the Association of Military Surgeons in October, 1926. He said:

Another organization having a large and representative membership whose aims and purposes are identical with ours, which should be admitted to the family on an equal footing, is the Medical Veterans of the World War, now numbering some 2,000 members. Let me repeat Article II of the Constitution (which states the objects) of that Society:

"The dominant purpose of this association shall be patriotic service. The objects of this association shall be: to prepare and preserve historical data concerning the medical history of the war; to cement the bonds of friendship formed in the service; to perpetuate the memory of our medical comrades who made the supreme sacrifice in this war; to provide opportunity for social intercourse and mutual improvement among its members; to do all in our power to make effective in civil life the medical lessons the war, both for the betterment of the public health and in order that preparedness of the medical profession for possible war may be assured."

It is my firm conviction that mutual benefits and much good would be derived by having the M. V. W. W. united with The Association of Military Surgeons. The Medical Veterans could effect this affiliation without in any way impairing the social, historical, memorial aims or usefulness of the society. Once in The Association there could be created a Section specifically for the assembly of the Medical Veterans under their own chairman.

Your committee believes that this union is especially advisable to accomplish the first and last of the purposes of our organization as quoted by General Ireland from our Constitution, namely, to prepare and preserve historical data concerning the medical history of the war, . . . and in order that preparedness of the medical profession for possible war may be assured.

Your committee has, therefore, under the authority conferred upon it ratified the union of the two organizations upon the following basis:

1. All members of the Medical Veterans of the World War are eligible for membership in The Association of Military Surgeons upon payment of dues to the latter, and all members of the former in good standing become members of the latter without the payment of additional dues until July 1, 1928, and shall be enrolled as such and receive the magazine of The Association.

Thereafter the annual dues of The Association ($3.00), which includes the magazine, shall be the only dues charged them.

2. A section called the Medical Veterans of the World War Section shall be created in The Association which shall include all members of the Medical Veterans of the World War who are members of The Association. This section shall have such meetings, banquets, etc., as may be determined upon by the president and secretary of the Section in accordance with Article IX of the Constitution of The Association.

3. All records, rolls, and funds of the Medical Veterans to be turned over by the Secretary to the Secretary of The Association of Military Surgeons.

4. The following Section officers have been elected for the year beginning July 1, 1927, at which date these arrangements will go into effect:

President: Colonel John O. McReynolds, Med. Res., Dallas, Texas.

Secretary: Colonel Arthur T. McCormack, Med. Res., Louisville, Kentucky.

A. T. McCormack, *Secretary* — Hubert Work, *President*

These conditions are in agreement with the action of The Association with reference to this union taken at their last annual meeting. It will be noted that all members of the Medical Veterans in good standing became members of The Association on July 1, 1927, but will not be called upon to pay dues for a year thereafter. This was arranged by a payment from the funds of the Medical Veterans to the Military Surgeons of two dollars for each member of the former in good standing, not already a member of the latter, so as to cover the cost of magazine for the first year.

It is a great gain to have brought together in one body those of the medical profession who are interested in medical preparedness and the study of the specialty of military medicine, and to have available for all of them the magazine as an organ of expression and a repository for the literature of our specialty. The section of medical veterans of the World War will have as its *raison d'être* to cultivation of the bonds of friendship and comradeship which grew out of the associations of that great episode. The dinner of the medical veterans at the annual meeting of the A. M. A. is an event which will grow in importance and in the pleasure that the recurring reunion will bring to us.

EDUCATIONAL COMMITTEE REPORTS PROGRESS

Work Accomplished From May 15 to August 15

616 Regular newspaper articles have been released for publication over signature of local county medical societies.
125 Special news articles released.
44 Health articles written and censored.
56 Speakers scheduled to give health talks before lay groups.
18 Radio talks arranged for Stations WLS and WGN.

DR. E. W. FIEGENBAUM

The Citizen

He was a good citizen. This simple, truthful sentence, as to him, was justified in full measure throughout his entire life, but it falls far short of giving a complete vision of the service he gave.

His was a life so full of activity and worthwhile deeds that no sentence or even a complete biography could reflect all the good in his life. His hand, heart and mind were ever ready not only to help but to lead in every activity for the betterment of his fellowmen.

He realized in early life that thorough preparation is necessary to fit man to successfully execute the program of human life; he therefore was a real student. He further realized that continual preparation is necessary until the curtain has been drawn at the close of the last number on the program.

He chose a great profession and though a physician and surgeon for more than half a century he kept up to date with every advance in the science and research of modern times.

His practice brought him in close touch with every phase of human life, he knew the weakness and frailties of man; he knew the essentials of good citizenship; he was pre-eminently a splendid example in himself. But this was not the full measure of his worth. If there is one word in the English language that would express his predominant virtue and the virtue which he continually sought to encourage in oth-

ers it is "purity." His whole vitality was put into word and action in his fearless and persistent demand for a clean standard of morals. His stand on any question was clean and clear cut. He was guided in the affairs of life, not by the thought of personal gain, but by the right as he saw it.

As a citizen he was keenly interested in the welfare of his home community and in every business with which he was associated. He was an active factor and his judgment was well balanced and sound.

In his public speech he was forceful and convincing and in this he gave freely of his time and talent in inspiring addresses on helpful subjects.

He was a lover in his home, an exemplar in his church, a helper in the school, a factor in business, a peer in his profession, a prince with his associates, an honor to his community, to the state and the nation.

"He was a good citizen."

—Thos. Williamson.

In Memoriam

Let us pause and rise in reverence to the memory of our late beloved Secretary, Dr. Edward W. Fiegenbaum, who died at his home in Edwardsville in the early morning of July 28, 1927.

In every essential that the word implies, Doctor Fiegenbaum was a man; a man to man, a man with men, a man with God—God's man. If all men were like him, we would need no asylums, no jails; there would be no discord, no back-biting, no blasphemy, no strife, no quarrel, no crime, no war, no curse.

How best to exempt from oblivion the services of his life, is the duty of us who survive. Though words may extoll to the sublime his many virtues, how ineffectual any thoughts we may now express be in comparison with the words of praise of him, then, can we best honor him now by doing those things he would wish us to do, were he here with us—Give the friendly smiles, extend the hearty handclasp, speak the words of cheer and encouragement, salute with a whole-soul greeting; and, as he so much enjoyed quoting Edgar A. Guest, would doubtless like to say: "If with pleasure you are viewing any work a man is doing,

And you like him or you love him—tell him now;
More than fame and more than money is the comment, kind and sunny,
And the hearty, warm approval of a friend;
For it gives the life a savor; and it makes you stronger, braver;
And it gives you heart and spirit to the end."

In the urge of life, are we not too much inclined to apply our energies to material things? Should we not, to a greater degree, express, to each other those thoughts that awake the higher emotions and really make life worth living? Do we not too often wait till death comes before we speak those words which to every heart brings the spirit of happiness? 'Tis these things, I think, our departed brother would want us to do.

So then, our greatest tribute to his memory is to build monuments to the living—not of cold granite—but monuments of warm devotion to duty, of affection, of commendation, of encouragement, of hope for better things, of faith in the ultimate triumph of truths, of charity to all —that right is might; and of deeds of kindness and forebearance.

As to his death: "Wherefore, O judges, be of good cheer about death; and this of a truth, that no evil can happen to a good man, either in life or after death."

Doctor Fiegenbaum was a good man! We shall miss him!

—Geo. E. Wilkinson.

For several years Dr. Fiegenbaum was county physician and at various times he held the position of local representative of the State Board of Health and the State Board of Charities.

He was president of the Southern Illinois Medical Society in 1911 and in 1918 he was elected to the presidency of the Illinois State Medical Society. He was a member of the American Medical Association, Illinois State Medical Society, Tri State Medical Society, St. Louis Medical Society, Southern Illinois Medical Society and the Madison County Medical Society, serving the latter organization as its secretary for over twenty-one years.

He was a member of the Methodist Episcopal Church since his boyhood. Fraternally he was affiliated with the Independent Order of Odd Fellows and the Knights of Pythias.

Dr. Fiegenbaum took an active interest in

civic betterment and the upbuilding of the various industries and enterprises of the community. For many years he took special interest in the welfare and health of the school children, giving his services and talents freely for the betterment of the schools, and for some time he served as a member of the Board of Education.

For many years Dr. Fiegenbaum took an active part in work for the control of tuberculosis. He was secretary of the Madison County Antituberculosis Association since its inception. The fulfillment of the duties of this office required much time and detailed work. It was largely through the efforts of this organization that a campaign was launched for the erection of a county tuberculosis sanitarium in its inception and later Dr. Fiegenbaum took an active part in bringing this enterprise to fruition.

During the late unpleasantness, Dr. Fiegenbaum was a member of the Madison County Exemption Board, giving much of his time in discharging the trying and difficult duties of this position.

During the course of his long and useful career, Dr. Fiegenbaum served in an official capacity in various enterprises and in each and every instance performed the duties of the position in so efficient a manner that any one of which would have made him an outstanding figure in the community.

Organized medicine sustained a great loss in the death of Dr. Fiegenbaum. For many years he was actively interested in medical legislation and the upbuilding of medical organization. He accomplished much in this direction while serving in the capacities as president of the Southern Illinois Medical Society and later as president of the Illinois State Medical Society, and as a member of various committees in the state and national organizations. His interest and enthusiasm in organized medicine were prompted solely by the altruistic motive of benefitting the health and general welfare of the public through wise legislation.

Dr. Fiegenbaum was secretary of the Madison County Medical Society for nearly twenty-two years, and its members deeply feel his loss. He gave to this organization full measure of devotion through all these years. He was the leader in the upbuilding of this organization, successfully guiding it through many trials and vicissitudes and its present standing in the community and the state is due largely to his efforts in its behalf.

This publication, *The Madison County Doctor*, was founded by him in July, 1910, and he has edited it since its inception, all for the glory of the organization which he served so long and well.

It shall be the endeavor of this society to continue this publication in memory of him who gave to it his devotion and services in unstinted measure.

Dr. Fiegenbaum was a man of versatile talents and outstanding ability, thorough honesty and firm integrity and he was eminently successful in all undertakings in which he became interested.

—J. A. Hirsch, M. D., in *Madison County Doctor*.

SUCCESSFUL PHYSICIAN GIVES "DO'S" AND "DONT'S" TO YOUNG PHYSICIANS

"My son—a physician, member of the noblest profession of them all, should, like Caesar's wife, be above suspicion and without reproach.

"To be successful and to do your part in keeping the profession on its high pedestal, you must not only be a competent practitioner—you must observe every law of medical ethics. I have practiced longer than you have lived. It is hard, I know, for a young men to accept pearls of wisdom from an older head; but may I in all brotherly spirit give you, my son, two lists of 'Do's' and 'Dont's?'

"Put these where you can see them night and day, until they become part of your fibre. Good luck—and may God bless you!"

DO

Join your County Medical Society immediately.

Apply for membership in the A. M. A., because all physicians should support organized medicine.

Join some religious organization; medicine and religion should walk hand in hand.

Institute business methods in your office.

Treat the worthy poor without charge; but

collect at once any bills from those able to pay your fees.

Study each case; know just what you are treating and why you are treating it as you are.

When you can afford it, marry a helpmate—not a social climber, a nagger or a jealous woman.

Be on the job at all times. Remember that medicine is a jealous mistress.

Observe every tenet of medical ethics—treat your patients and conferers as you want to be treated.

Conduct yourself like a gentlemen at all times. remembering that a physician is at least several degrees above hoi polloi! Our is a dignified profession.

DON'T

Do not join lodges merely in the hope of gaining practice.

Do not permit people to speak slightingly of medicine nor of the medical profession.

Do not be playing golf when you should be at your office. "A time for everything!"

Do not affiliate yourself with free clinics.

Do not permit folks to call you "doc" unless the clergy permit people to call them "Rev.!"

Do not attempt, even indirectly, to take patients away from any other physician.

Do not try to take all of a patient's money. Remember the adage—live, and let live.

Do not knock another physician; and do not listen to criticism by others.

Do not join a hospital staff unless you realize your time is of great value. Then join and go at it hard!

Do not split fees! Do not attempt diagnostic guesswork! Do not close your mind to progress! Do not get too firmly into routine.

"My son, if you will observe these precepts, you will live a long and comfortable life, do a great deal of good in the world and be a distinct credit to that noble profession to which you have sworn allegiance!"—Author Unknown.

POOR INVESTMENT

I sent my boy to college,
With a pat upon the back.
I spent ten thousand dollars,
And got a quarterback.

Correspondence

TELEPHONIC PRESCRIPTIONS FOR NARCOTIC DRUGS

535 N. Dearborn St., Chicago.
August 25, 1927.

To the Editor:

On my recent return to Chicago I found awaiting me your letter of August 5 relative to telephonic prescriptions for narcotic drugs. Your informant has apparently confused the issue and compounding of telephonic prescriptions for narcotic drugs with the proposed assumption by the Commissioner of Prohibition and the Secretary of the Treasury of the right to promulgate a regulation to govern the issue and compounding of such prescriptions. To the issue and compounding of telephonic prescriptions for narcotic drugs, under appropriate conditions, I have entered no objection. But I have been and am unwilling to concede to the Commissioner of Prohibition and to the Secretary of the Treasury the right to promulgate a regulation purporting to authorize the issue of such prescriptions and I have therefore expressed my objections to the assumption by them of any such right.

I realize that occasions arise when it is expedient—and I might say even necessary—to prescribe narcotic drugs by telephone. I realize that prescriptions are now given by telephone and duly filled. I have raised no objection to this practice. I have heard no discussion concerning the advisability of discontinuing it and have been a participant in no discussion in which the question was raised.

But since the Harrison Narcotic Act, as amended, forbids the filling of prescriptions, given orally, for narcotic drugs, whether by telephone or otherwise, I have declined to admit any right on the part of the Commissioner of Prohibition and of the Secretary of the Treasury to amend the act and to substitute for it a law of their own. Such a claim of authority was implied in a regulation proposed by the chief of the Narcotic Division of the Bureau of Prohibition and was conceded by various representatives of the drug trade present when the proposed regulation was discussed. My own view, however, was that if we conceded the right of the officers named to promulgate a regulation such as was proposed, not only without authority of law, but

purporting to amend the law itself, we thereby conceded their right to promulgate other regulations of like character, and that our last state would be worse than our first.

Moreover, such a regulation as was proposed would be a mere idle gesture by the officers promulgating it so far as the public and the courts are concerned. These officers are empowered to make only such regulations as may be needful for carrying the provisions of the act into effect. They are not empowered to make any regulations, modifying, supplementing, or repealing the act, or any part of it, and any regulations undertaking to accomplish any of these ends would be void and of no effect in so far as the public and the courts are concerned.

Of course, the promulgation by the Commissioner of Prohibition and the Secretary of the Treasury of a regulation purporting to legalize telephonic prescriptions for narcotic drugs would serve as notice to narcotic law enforcement officers not to prosecute physicians who issue telephonic prescriptions for narcotic drugs, nor pharmacists who compound such prescriptions. That, however, would be a very poor way of issuing such instructions to officers and employes of the Treasury Department as to the manner of the discharge of their duties. The proper way to accomplish that end, as I have pointed out to the chief of the Narcotic Division, is by the issue of instructions directly to such officers and employes to institute no prosecutions in such cases without first submitting the facts to the office of the chief of the Narcotic Division and obtaining express authority for prosecution.

It is true that the law does not expressly authorize the chief of the Narcotic Division, nor the Commissioner of Prohibition, nor the Secretary of the Treasury to determine which violations of the Harrison Narcotic Act shall be prosecuted and which shall not. Each of the officers named, with due regard to their respective relative ranks, has the inherent right and duty, however, to exercise such discretion. The exercise of such discretion is necessarily a part of the right and duty of every administrative officer who has not been supplied with an operating force large enough to enable him to execute and to enforce to the very letter every law assigned to him for enforcement, within the entire jurisdiction under his control. Any administrative officer under such circumstances has to determine how to dispose of such forces as have been allotted to him in the manner that will accomplish the most effective enforcement possible of all the laws for the enforcement of which he is responsible, having in mind the purpose for which each of the laws was enacted. An administrative officer who devotes his time and energies and the time and energies of his men and of the courts to the prosecution of merely technical violations of law, when their time and energies might better be devoted to detecting and prosecuting substantial offenses thereby demonstrates his incompetence.

Even, however, if the Commissioner of Prohibition with the approval of the Secretary of the Treasury, could lawfully promulgate a regulation amending the Harrison Narcotic Act and authorizing the prescribing of narcotic drugs by telephone, the prescribing of such drugs in that manner would still be unlawful in Illinois and in many other states. Such prescribing would still be forbidden by state law. In Illinois, for instance, subsection 14 (a), section 66, chapter 91, Cahill's Revised Illinois Statues, 1925, makes it unlawful for any person to sell, barter, exchange, distribute, or to give away any opium or coca leaves or any compound, manufacture, salt, derivative or preparation thereof, except in pursuance of a *written* prescription and requires this written prescription to be *signed* by the physician, dentist, or veterinarian by whom it was issued. No regulation issued by any federal or state officer can change this law; nothing short of an act of the Illinois legislature can do so.

The necessity that occasionally arises for issuing and for compounding telephonic prescriptions for narcotic drugs is, it seems, being met at the present time by the exercise of common sense and good judgment on the part of physicians and pharmacists and narcotic law enforcement officers. The continued exercise of such judgment and common sense by narcotic law enforcement officers can be insured and fortified if necessary by the issue of office instructions by the Commissioner of Prohibition to guide them in the discharge of their respective duties. If any necessity can be shown for the issue of such instructions, I believe it probable that the Commissioner of Prohibition will issue them. Under such circumstances, it seems to me that it would be unfortunate to bring the situation to the no-

tice of the public generally by covering it in official regulations that must have a wide circulation. The promulgation of such a regulation would be notice to the world that telephonic prescriptions for narcotic drugs were valid. Under such circumstances the narcotic peddler and the narcotic addict would be invited to telephone to one or more druggists, in the name of any physician whom they might select, asking that a stated quantity of narcotic drugs be dispensed and promising to file the necessary written prescription later. Any physician might thus readily become involved in a controversy with the pharmacist and the narcotic law enforcement officer; for he might have difficulty in proving the negative proposition, namely, that he had *not* telephoned for the narcotic drugs. When a physician's signature is forged to a written narcotic prescription, the narcotic prescription speaks for itself; a telephonic narcotic prescription could not do so.

Finally, in view of the fact that the law of the United States and the law of Illinois require prescriptions for narcotic drugs to be in writing, in view of the fact that the Commissioner of Prohibition and the Secretary of the Treasury have no authority whatsoever to change the law, and in view of the way the situation is now being met, it seems hardly expedient that the Commissioner of Prohibition and the Secretary of the Treasury should undertake to improve the situation by the exercise of an authority that they do not possess. If any action by the officers named is called for, it is merely that of issuing instructions to narcotic law enforcement officers to report to the chief of the Narcotic Division of the Bureau of Prohibition all telephonic narcotic prescriptions issued under circumstances that do not show the good faith of the physician by whom the prescription was issued and of the pharmacist by whom it was compounded, and then to await specific instructions before instituting prosecution.

I append a memorandum showing the provisions of the Harrison Narcotic Act, as amended, and of the laws of Illinois requiring prescriptions for narcotic drugs to be in writing.

Yours truly,

WM. C. WOODWARD,
Executive Secretary, Bureau of Legal Medicine and Legislation.

EXTRACTS FROM THE HARRISON NARCOTIC ACT, AS AMENDED, AND FROM CAHILL'S REVISED ILLINOIS STATUTES, 1925, RELATIVE TO THE PRESCRIBING OF NARCOTIC DRUGS

An act to provide for the registration of, with collectors of internal revenue, and to impose a special tax upon all persons who produce, import, manufacture, compound, deal in, dispense, sell, distribute or give away opium or coca leaves, their salts, derivatives, or preparations, and for other purposes, approved December 17, 1914, as amended, generally known as the "Harrison Narcotic Act."

Section 1 . . ,

It shall be unlawful for any person to purchase, sell, dispense, or distribute any of the aforesaid drugs, except in the original stamped package or from the original stamped package; and the absence of appropriate tax-paid stamps from any of the aforesaid drugs shall be prima facie evidence of a violation of this section by the person in whose possession same may be found; and the possession of any original stamped package containing any of the aforesaid drugs by any person who has not registered and paid special taxes as required by this section shall be prima facie evidence of liability to such special tax: Provided, that the provisions of this paragraph shall not apply to any person having in his or her possession any of the aforesaid drugs which have been obtained from a registered dealer in pursuance of a prescription, *written* for legitimate medical uses, issued by a physician, dentist, veterinary surgeon, or other practitioner registered under this act; and where the bottle or other container in which such drug may be put up by the dealer upon said prescription bears the name and registry number of the druggist, serial number of prescription, name and address of patient, and name, address, and registry number of the person *writing* said prescription;. . . ."

Section 2. That it shall be unlawful for any person to sell, barter, exchange, or give away any of the aforesaid drugs except in pursuance of a written order of the person to whom such article is sold, bartered, exchanged, or given, on a form to be issued in blank for that purpose by the Commissioner of Internal Revenue. . . . Nothing in this section shall apply—

* * *

(b) To the sale, dispensing, or distribution of any of the aforesaid drugs by a dealer to a consumer under and in pursuance of a *written* prescription issued by a physician, dentist, or veterinary surgeon registered under this act: Provided, however, that such prescription shall be dated as of the day on which *signed* and shall be *signed* by the physician, dentist, or veterinary surgeon who shall have issued the same: And provided further, that such dealer shall preserve such prescription for a period of two years from the day on which such

prescription is filled in such a way as to be readily accessible to inspection by the officers, agents, employees, and officials hereinbefore mentioned.

* * *

CAHILL'S REVISED ILLINOIS STATUTES. 1925

Chapter 91, Section 66. . . .

Fourteen a. It shall be unlawful for any person, firm, or corporation to sell, barter, exchange, distribute, or give away any opium or cocoa leaves, or any compound, manufacture, salt, derivative or preparation thereof, except in pursuance of the *written* prescription of a licensed physician, licensed dentist or licensed veterinarian, who is registered with the United States collector of internal revenue in the district in which he resides, in accordance with the provisions of an Act of Congress entitled, "An Act to provide for the registration of, with collectors of internal revenue, and to impose a special tax upon all persons who produce, import, manufacture, compound, deal in, dispense, sell, distribute, or give away opium or coca leaves, their salts, derivatives, or preparations, and for other purposes," approved December 17, 1914; said prescription shall contain the name and address of the person for whom prescribed (or if prescribes by a veterinarian, shall state the kind of animal for which prescribed and the name of the owner thereof), shall be dated as of the day it is *signed*, and shall also be dated as the day it is filled, shall not be altered or changed by any person except the physician, dentist or veterinarian by whom it is *signed*, and shall be retained on file by the person, firm or corporation by whom the same is filled for a period of not less than two years and it shall be filled but once, and of it no copy shall be made by any person except for the purpose of record by the physician, dentist or veterinarian by whom it is *signed*, or by the Department of Registration and Education and officers of the law, and it shall at all times be open to the inspection of the prescriber, the Department of Registration and Education and all officers of the law. . . ."

PROHIBITION ENFORCEMENT

September 3, 1927.

To the Editor:

I am enclosing herewith copy of letter sent to Director of Prohibition, Mr. Yellowley, which is self-explanatory. It seems to me that the State Society should take some action to have representatives present who know the law when investigations of this kind come up. There seems to be a general program of intimidation to disgust the doctors so they will throw up their books. The Federation of Labor always sent legal representatives to hearings when their members are accused of violations in order to see that they get justice.

It is not only the prohibition law that is harrassing the doctor, but the Harrison act as well. A patient entitled to morphin to ease their pain until death takes them has the same difficulty in getting their prescriptions filled. The investigation is carried on in the same high handed way. As an example, they went into the Metropole Hotel with Mary Doe warrants and demanded admission to every guest who was in the hotel less than two weeks. They knocked at the door of an elderly nurse, whose only crime is that she has to work when others are taking it easy, wouldn't allow her time to dress at 2 o'clock in the morning; threatened her and accused her of being a morphin fiend. When they couldn't catch her in any way, they were unable to identify her, they called up their director and then announced they had made a mistake. The woman was sick for several days following the shock. If you care for this woman's name and address I will furnish it to you.

If you can do anything to arouse the indignation of the profession to secure correction of these evils I trust you will pass these letters on to the proper authority or publish them as you see fit.

Thanking you, I am,

Yours very respectfully

HELEN B. FLYNN, M. D.

Sept. 3, 1927.

Mr. Yellowley,
Director of Prohibition,
Chicago, Illinois.

Dear Sir:

On August 29 at approximately 11 A. M. two men called at my residence representing themselves as government officers—one flashing a bronze pin on his belt—the other a small pocketbook containing a photograph. They demanded my liquor book and blanks for inspection.

They took approximately one hour to examine book and quiz me. Their quiz was exceedingly illegal wanted to know why there was no sign on my house, where my office was, why I had made some erasures; why I had so many families with the same surname; why the diagnosis was not on blanks. I answered them in a straightforward manner, because I am not a criminal—if I were no doubt I would have told them to go to a hotter region than Chicago.

They demanded that I call my sister, who

lives upstairs. Quizzed her as to the date she got the whiskey, how much she paid the druggist and how much she paid me and what was the name of the brand. The net result was she suffered from a general nervous spell for several days—nice treatment for the mother of a young infant. They next went to the home of a patient—a very bad cardiac case, to whom shock of any kind may mean instantaneous death—wanted to know if her husband lived there and when he would be home. If this is sane enforcement of the Volstead act, can you tell me what is the difference between it and Russian Communism?

In regard to diagnosis, I have tried to make such since I received your letter; previous to that I wasn't even aware that was necessary—it is only about 3 months since you sent that letter. In this regard let me ask why has the prohibition forces the right to annul an age old law, the right of a physician to hold his patient's ailments in confidence. Your men view these books—so does everyone handling them in your office. Why not amend the law to publish the ailments of everybody treated by a doctor in the daily papers, and perhaps then the reformers who propose such grotesque laws will have to fade out of the spotlight. What if their doctors abused the confidence reposed in them? Some of my patients wouldn't take anything with alcohol in it if they knew they were getting it. Why has the prohibition office the right to undermine my patients' confidence in me? I am a graduate of the University of Illinois and the state has licensed me to practice medicine. I take the responsibility for the treatment of these people; if death occurs I have to sign a certificate, the state won't allow your men to sign one without a medical license; then, why dictate the type treatment I shall use?

I believe that there is a bona fide place in medicine for the use of alcohol and alcoholic products—that much better results can be obtained with them in chronic diseases, than some of our arch medical hypocrites who do nothing but practice surgery, and leave the patient to the drudging physician after he has collected his fee without producing results. The toxins of both cancer and tuberculosis are soluble and dialzyable in a 50 per cent. solution of alcohol. It is therefore apparent that when these toxins are soluble they can be more easily excreted by the body. Moreover, alcohol taken in reasonable quantities when pure is practically non-poisonous and rapidly excreted.

Before making a protest to the medical societies, lest I might have been a victim of confidence men, I called your department and was referred to Mr. Carson. His assistant answered and I stated my case and asked if any investigators had been sent out to my address on that date. He informed me unless I could furnish their names, he couldn't tell. I requested that he look up his reports for that date and he informed me he had no reports as yet for that date although over forty-eight hours had elapsed.

Now I would much prefer not to have any book and let the patients die a natural death than be hounded to death by men, who may or may not be confidence men—the United States government apparently doesn't care from their attitude.

Now, Mr. Yellowley, I do not believe any legislator would affix his name to a law of this type, if he knew beforehand how it was to be perverted, neither do I belive that the law can stand without medicinal alcoholic products. As to beverage alcohol, I have never given it for that purpose, and I believe if all the doctors in the city of Chicago were permitted to issue their books for beverage purposes alone, there would not and could not be as much drunkenness in this territory as there is since prohibition started. We never had so much drunkenness and so many murders, but it apparently is not noticed by the people who are supposed to enforce the law. Why not divert some of these energetic men who know nothing about medicine to collecting bona fide revenues for the United States?

If this course of affairs continues, I will take the matter to Washington, if it is necessary to make a trip there to present my claims.

Yours very respectfully,

---

13 REASONS FOR REGISTERING BIRTHS

There is hardly a relation of life, social, legal or economic, in which the evidence furnished by an accurate registration of births may not prove to be of the greatest value, not only to the individual, but also to the public at large. It is not only an act of civilization to register birth certificates, but good business, for they are frequently used in many practical ways:

1. As evidence to prove the age and legitimacy of heirs.
2. As proof of age to determine the validity of a contract entered into by an alleged minor.
3. As evidence to establish age and proof of citizenship and descent in order to vote.
4. As evidence to establish the right of admission to the professions and to many public offices.
5. As evidence of legal age to marry.
6. As evidence to prove the claims of widows and orphans under the Widows and Orphans Pension Law.
7. As evidence to determine the liability of parents for the debts of a minor.
8. As evidence in the administration of estates, the settlement of insurance and pensions.
9. As evidence to prove the irresponsibility of children under 12 years of age for crime and misdemeanor, and various other matters in the criminal code.
10. As evidence in the enforcement of laws relating to education and to child labor.
11. As evidence to determine the relations of guardians and wards.
12. As proof of citizenship in order to obtain a passport.
13. As evidence in the claim for exemption from or the right to jury and militia service.—Minnesota Medicine. (From Annual Report, Chicago Department of Health, 1894, page 50.)

MORE GOVERNMENT INTERFERENCE

Internal Revenue Act

Physician's Opinion as to Whether Patient Believed He Was in Danger of Death at a Given Time

It has become the custom during the past few years for the Internal Revenue Department of the Treasury to send agents to visit physicians in order to ascertain the physician's opinion as to whether a certain patient of his believed he was in danger of death at a given time.

It is commonly known that wealthy individuals give away part of their estate to their wives and children in order to avoid the payment of inheritance taxes, and it is assumed by the Internal Revenue Department that this is done more frequently when the wealthy individual is affected with some disease which may prove fatal.

The Revenue Act of 1926, under Section 1104, states that the Commissioner of Internal Revenue or an inspector designated by him is authorized to examine any books, papers, records and memoranda, etc. Section 908 of the same act provides that the board many summon witnesses, produce the necessary books, papers, etc.

On the other hand, Section 352 of the Civil Practice Act of the State of New York provides that: "A person duly authorized to practice physics or surgery . . . shall not be allowed to disclose any information which he acquired in attending a patient in a professional capacity. . . . " The privileges given under this section can be waived under Section 354 of the same act by "the personal representative of the deceased person."

There is no judicial decision on Section 1104 of the Revenue Act of 1926, and in regard to this section the counsel of The New York Academy of Medicine has given the following opinion:

"In my opinion, if the personal representatives of the decedent have waived the right which the statute has established, the physician can be compelled to submit to examination and to furnish his records.

"It would, therefore, seem to me that, before a physician submits to questioning by a representative of the government, it would be necessary for him to obtain the consent of the personal representative of the decedent. Otherwise he would be breaching the confidential relationship existing between the physician and patient.

"In the event that the personal representatives of the decedent have not waived the right above mentioned, or the consent of the personal representatives of the decedent is not obtained, it would not, in my opinion, be necessary to furnish the data, or render the opinion requested."

It would, therefore, seem advisable for physicians to secure the consent of a member of the family or an authorized representative of the deceased before giving confidential information to an agent of the United States Internal Revenue Office.—N. Y. S. J. of Medicine.

MANY ROADS LEAD TO STATE MEDICINE

Shall We Governmentalize Medicine as We Have Education?

Many roads lead to state medicine. Some are well sign-posted highways; others are devious and as free from signs as the game stalker's trail.

Government health insurance is one of the highways which usually begins as limited service for limited groups and expands until it becomes universal. This form of socialism, which not only breaks through the sacred boundaries of the family circle and stalks to the bedside of the sick or "pre-sick," but invades the personal liberty guaranteed to free citizens, is already old enough in several countries to make its effects observable.

The extensive world-wide revival of socialism during the last few years includes that form of it long known as state medicine, and it therefore behooves those intelligently interested in the health and welfare of people to lay a barrage along this highway and strengthen the guards along the more devious trails leading to the same goal.

The open offensive for state medicine has not been renewed in the United States since its overwhelming defeat by the voters of California some years ago, in which even physicians—honest, able ones were active on both sides of the question.

One of our able physicians who favored California compulsory health insurance initiative defeated by the voters, after more than a year's observation abroad, writes us in a recent letter:

"I intended when I came to England making a real study of social and health insurance, but I have not more than scratched the surface. Of course, I don't

think they have health insurance at all. What it amounts to is merely a means of making medical relief available to a lot of people who would neglect themselves or else overcrowd the outpatient clinics. Curiously the doctors are more satisfied than those who are 'insured,' for those who have good-sized panels—2,000 is the maximum—get a steady certain income and carry on their other practice as well. They are planning now at the Ministry of Health to incorporate preventive medicine with regular recurring examination of the premium payers at biennial times, hoping to catch the early causes of rheumatism, arthritis, heart disease and tuberculosis which contribute here overwhelmingly to morbidity. The peculiarity that the English workers had, years before the coming of health insurance contributions, well-organized contributory relief societies known as 'friendly societies,' made the administration of the insurance act easy. Most of the actual administration of such benefits and determination of the individual's needs are under the control of such societies. *Nevertheless, the system is rapidly moving on toward state medicine.* In fact in every way England is more of a socialistic state than the most enthusiastic socialist of a few years back could have expected to find anywhere at any time, and as a result the country is in a state of dry rot."

"Dry rot" of a progressive service; dissatisfaction among those served; intellectual stasis and a pittance in compensation for those who serve; inculcation of the spirit of dependence where thrift should be a watchword, and making a political plaything of the most personal and precious of human assets—health—is the inevitable consequence of any form of state medicine, by any name.

While the frank state medicine movement is for the moment quiescent in our country, the promoters of devious trails to the same end are exceedingly active and numerous; many of them financed, their propaganda often published at public expense and more often as "news."

Different nonmedical groups are working for the control of medicine through control of hospitals, laboratories, clinics, organizations of technical assistants to physicians and other agencies essential to the complex well-rendered service to health.

Some of our universities are teaching, practicing and otherwise fostering a spirit among students that health and illness are state functions which ought to be as "free" and as official as education and served by the same or similar machinery. Some medical schools foster this spirit with both free and near-free clinics for rich and poor. Some organizations of educated groups of physicians themselves contribute to the movement; and individual doctors, on the theory that certain contact will increase their clients, or that they may aid worthy causes by serving the sick in public places managed by others instead of in their own offices, thereby help materially the arrival of the day when the doctor will be but another hired man.

Being the hired man is a perfectly honorable occupation, and many and rapidly increasing numbers of physicians are so engaged. This in itself is not the danger to the cause of medical and health progress, but it is one of the trails that astute promoters hope to see converted into a highway that will make of medicine as complete a government function as education now is. This at first, of course, to be a voluntary matter so far as the citizen is concerned, but later to be as compulsory as attendance of children now is at government schools.

In any event we are moving along that road, and so certain are some that the goal is in sight that they are attempting legislation calculated to make health and medicine subsidiary to education, instead of an independent government unit when the new highway of universal compulsory government medicine reaches Washington.

We have a feeling that somewhere along this route an impossible obstacle will be encountered and that medical and health service will continue to be for a long time a personal matter between those who serve and those who need service, with the proviso that the state will increase the volume and quality of health service for the insolvent as the paramount duty it is.—California & Western Medicine, December, 1926.

DIET THAT PUTS GASTRIC ULCERS COMPLETELY AT REST

Dr. Jarotzky, in the June 4, 1926, issue of *Schweizerische Medizinische Wochenschrift*, outlines a very simple diet for the treatment of gastric ulcers as follows:

After the onset of a severe hemorrhage or during it, the patient is kept in bed and is given the raw white of an egg in the morning and twenty grams of fresh unsalted butter at about 3 p. m. This is increased every succeeding day by one white of egg and twenty grams of butter, so that on the tenth day, about the whites of ten eggs and 180 drams of butter are given. Aside from this food, the patient is given nothing to eat or drink—no drugs and no nutritive enemas. This diet fails only in the cases of very marked obstructions (stenoses) in the region of the pylorus or that of the anastomotic opening. To apply this diet for longer than ten days would be to disturb him unnecessarily. After this period the patient is given egg albumen in the morning, and in the afternoon strained soups which are made in water without salt and with fresh unsalted butter for various cereals (rice, manna, barley, etc.), then mashed potatoes and various purees of vegetables (also cooked in water, without salt, and with butter). Absolutely no milk is given during the whole treatment.

SUNLIGHT THERAPY NOT NEW

In or before the eighth century B. C., says Dr. C. W. Saleeby in *Sunlight and Health*, Zarathustra, foremost among sun worshippers, taught the cult of the sun and the green leaf and thrift, in place of pillage and murder. In the beginning of medicine, Hippocrates, practising at Cos, in the Temple of Aesculapius, son of Phoebus Apollo, god of the sun and music, practised

the sun cure. In the beginning of our era, Galen and Celsus used the sun.

In 1893, says Dr. Saleeby, Niels Finsen began to cure lupus by the local use of sunlight, and Sir James Crichton-Browne made observations to the same effect in England. In 1900, on May 1st, the London Hospital began the cure of lupus by the local use of sunlight, thanks to Queen Alexandra, who was instrumental in bringing her young fellow countryman's idea from Copenhagen.

STATUS LYMPHATICUS A PURELY IMAGINARY CONDITION

The Maligned Thymus

The thymus gland and its persistence in hypertrophy in infants, the part it plays in causing deaths of spectacular and dramatic suddenness, and its relationship to that will o' the wisp of pediatric pathology, status lymphaticus, has figured largely in pediatric practice during recent years. The occasional demonstration of a stymic shadow by the X-ray has increased this interest to a point where failure to X-ray the puerile chest before operation has, in some circles, almost reached the point of constituting malpractice.

The interesting part of this anti-thymic zeal lies in the fact that no scientifically acceptable evidence has ever been presented to show that an enlarged or persistent thymus ever figured in an operative death, or that status lymphaticus is actually a status at all. In the midst of the precipitate and voluble conclusions that have been reached concerning the thymus gland, it is of interest to find such a calm and collected presentation of the situation as Edith Boyd has provided for us in the current number of the *American Journal of Diseases of Children* [33:807 (July) 1927].

The first description of death caused by suffocation from pressure made on the trachea by the thymus emanated from F. Plater in 1614. Status thymicolymphaticas was first described by A. Paltauf in 1890, and his conception of this condition, in which a large thymus goes hand in hand with general lymphoid hypertrophy, has been accepted to the present day. What has been lacking in this whole discussion has been a large series of observation of the thymus gland and the lymphoid tissue in infants and children who have not died as the result of wasting diseases, and it must be remembered that few well nourished children die during the first month of life. Accurate measurements under suitable conditions of normalities have now shown us that the thymus loses weight during the first two weeks of life, during which time it is being compressed in and around the mediastinal structures. After this time the gland begins to increase in size again, and it is at this stage that symptoms of pressure may be noted. The fact that thymic symptoms do not appear after the first year of life is because, although the thymus has been increasing in size, the chest has been growing at a much more rapid rate, so that the gland becomes relatively insignificant.

It is granted, then, that symptoms may be produced during the first year of life by mechanical pressure of a normal gland on the mediastinal structures and especially on the recurrent laryngeal nerve; it is doubtful if this pressure ever results in death. The picture of status thymicolymphaticus is that of the normal thymus and lymphoid tissue of the *well nourished child*—the child that rarely comes to autopsy.

Cases of supposed death by status lymphaticus were then investigated by Dr. Boyd, and in every one another possible cause of death was found; one, for instance, died of an unusual accidental electrocution; one of stychnine poisoning; others of early pneumonia, etc.

This type of investigation indicates what many conservative pediatricians have already been thinking—that a diagnosis of death by status lymphaticus may not be a terrible one, because status lymphaticus is a purely imaginary condition.—Boston M. & S. Journal.

A NEW MILK MODIFIER

Horlick's Milk Modifier, a new product made by the Horlick's Malted Milk Corporation, Racine, Wisconsin, is now being introduced to the medical profession. This maltose and dextrin product, which is derived exclusively from malted grains, was first announced at the annual meeting of the American Medical Association in Washington, D. C., in June and created much interest. Since that time it has been presented to convention gatherings in other parts of the country and the Horlick representatives are now calling on individual members of the profession.

Horlick's Milk Modifier is presented and supplied to the profession along ethical lines. No feeding directions accompany the package. A statement on the wrapper is to the effect that the product is for prescription by physicians only.

In conformity with the Horlick policy the Milk Modifier is put up in hermetically sealed glass jars only. The one-pound size retails at 75 cents and the five-pound jar at $3.00. The fact that it carries the name "Horlick's" is a guarantee that only the finest materials are used.

In the June 18th issue of the Journal of the American Medical Association, under the heading of New and Non-official Remedies, the acceptance of the Horlick Milk Modifier was announced by the American Medical Association. The product differs from the malt sugars in that it incorporates soluble and readily assimilable protein and valuable mineral salts from the grains. The Horlick firm points out this fact as a decided advantage for its product.

Another point which is mentioned as an advantage in favor of the new product is the proportion of its two chief carbohydrates, maltose and dextrin, which are 63% maltose and 19.5% dextrin.

The new Horlick formula apparently has met with pronounced success during a period of trial among physicians in Canada.

Samples of the new product, literature concerning its use, prescription blanks and file cards giving methods of preparation, are available for members of the medical profession and will be sent upon request.

THE AMERICAN COLLEGE OF SURGEONS CONGRESS

The American College of Surgeons will hold the seventeenth Clinical Congress in Detroit, October 3-7. Headquarters will be at the Book-Cadillac and Statler hotels and the meetings will be held at the Statler Hotel and Orchestra Hall. The Hospital Standardization Conference will extend from Monday morning to Thursday afternoon and will include a discussion of hospital and nursing problems and hospital demonstrations. Monday evening's program will include an address of welcome by the local chairman, the address of the retiring president, the inaugural address of the new president, and the John B. Murphy oration. Clinics in general surgery will be held in the Detroit hospitals each morning from Tuesday to Friday, and in eye, ear, nose and throat work the same afternoons. Clinics will also be held at University Hospital, Ann Arbor, Tuesday to Thursday. On Tuesday and Wednesday mornings and afternoons, and on Thursday morning, clinical demonstrations will be held at the Statler Hotel (mornings) and Orchestra Hall (afternoons). On Thursday afternoon the annual meeting of the Governors and Fellows will be followed by a cancer symposium. On Friday afternoon there will be a symposium on traumatic surgery, to be participated in by leaders in industry, labor, indemnity organizations and the medical profession. On Tuesday evening the program will take the form of a celebration of the Lister Centennial. On Thursday evening there will be a large Community Health Meeting in the Masonic Temple and on Friday evening the Annual Convocation of the College. Other outstanding features will be the exhibits. In addition to the commercial exhibits there will be a replica of the Lister exhibit at the Wellcome Museum of Natural History, London, including Lister's operating rooms and hospital wards. The Departments of Hospital Activities, of Literary Research, and of Clinical Research of the college will also present exhibits. Among the foreign guests will be Sir John Bland Sutton, England; J. M. Munro Kerr, Scotland; Gordon Craig, Australia; Gustaf E. Essen-Moller, Sweden; S. A. Gammeltoft, Denmark. The retiring president is W. W. Chipman, Montreal, and the president to be inaugurated, George David Stewart, New York. The Lister oration will be delivered by W. W. Keen, Philadelphia. The chairman of the Detroit Committee on Arrangements is Alexander W. Blain.

DRUG STORE SHOWS UP QUACKERY

The average drug store carries so-called patent medicines chiefly because a certain proportion of the public is misguided enough to demand them. As there is a much smaller profit on such goods than on most of the other merchandise carried, it would be to the druggists' advantage to abandon this general line were it not for incidental sales of a general character.

Few have the courage to do this, but a drug store in Spokane goes one step farther according to the *Health Messenger* of Seattle, Washington, and actually advertises in its store windows:

"These Remedies are an Insult to Public Intelligence."

"We Consider This Class of Merchandise 'The Bunk'."

"When Ill Consult Your Physician; Then Let Us Fill Your Prescription for You With Drugs of Value."

This idea commends itself as a really new form of health education.

Health News, Aug. 1, 1927.

OLE'S TESTIMONY

Ole Olson, trackwalker, was testifying after a head-on collision. "You say," thundered the attorney, "at ten that night you were walking up toward Seven-Mile crossing and saw No. 8 coming down the track at sixty miles at hour?"

"Yah," said Ole.

"And when you looked behind you you saw No. 5 coming up the track at sixty miles an hour?"

"Yah," said Ole.

"Well, what did you do then?"

"Aye got off track."

"Well, but then what did you do?"

"Well, Aye said to myself, 'Dis bane hell of a way to run a railroad.'"

A SPINE SONG

(To be sung to the Good Old Pre-War Tune)

Call a doctor in the night time
If your pulse is acting queer,
For with him it's just the right time
To remove your leg or ear.

(Chorus)

For it's always fair weather
When Specialists get together,
With your lungs full of ether
And your fam'ly full of fear.
Oh, it's always fair weather
When Specialists get together,
With a spine on the table
And a good saw ringing clear.

J. S. in *Life*.

A CARBON COPY

"Dat baby of you's," said Mrs. Jackson, "am de puffect image ob his fathah."

"Yas," answered Mrs. Johnson. "He am a reg'lar carbon copy."—*Journ. Am. Med. Editors' Assoc.*

ANATOMICALLY SPEAKING

Judge—"Where did the automobile hit you?"

'Rastus—"Well, Jedge, if I'd been carrying a license numbah it would hab busted to a thousand pieces."—*Puck*.

TOO LATE TO OFFICIATE

Country Policeman (at scene of murder)—"You can't come in here."

Reporter—"But I've been sent to do the murder."

Policeman—"Well, you're too late; the murder's been done."—*Answers*.

Original Articles

THE DEVELOPING RELATIONS OF THE PHYSICAL SCIENCES TO DENTISTRY, MEDICINE AND PHARMACY*

G. W. CRILE, M. D.
Cleveland Clinic
CLEVELAND, OHIO

President Kinley, members of the graduating classes, ladies and gentlemen:

The conventional polite gesture, amounting to an overworked bromide, of offering you congratulations on your good fortune in meriting a degree from the University of Illinois is appropriate on such an occasion as this. With respect to your Alma Mater you are indeed fortunate but your real great good fortune lies beyond the University of Illinois and embraces it—it is that you are beginning your careers in the golden age of science; in a golden age of economics; in a country of free and equal opportunity. There is no romance in fiction equal to the romance of science. I do earnestly congratulate you on becoming a part of the present epochal movement in science.

The medical sciences, of which dentistry, pharmacy, and medicine are subdivisions, are today struggling out from the state of empiricism toward the status of exact sciences. In this progress two tendencies may be noted, one toward increasing specialization within the medical field itself, the other toward increasing interrelations with other sciences—with physics and chemistry in particular.

During the past century the fields of physics and chemistry have been extending with phenomenally rapid strides, and this progress, together with the ever increasing specialization within the field of medicine, has caused workers within this field to realize that they must look increasingly to the sciences of chemistry and of physics for the interpretation of vital forces and for aid in the extension of therapeutic measures.

We have been accustomed to think of the wonders of physical science in terms of such achievements as the rapid development of world-wide radio communication, and of the flight of Lindbergh, but no less dramatic, no less far-reaching, are the achievements of the physical sciences in the field of medicine.

That the phenomena of life are subject to the same physical and chemical laws as those which govern the phenomena of the so-called inanimate world is now generally accepted, and the rôle of electro-chemical processes in living phenomena is indicated by the findings of many investigators from Becquerel in 1835 and Holmgren in 1866, to the more recent investigations of DuBois Reymond, Crehore and Williams, Burdon Sanderson, Waller, Bose, Piper, Loeb, Steinach, Einthoven and Jolly, Gotch and Horsley, Nernst, A. V. Hill, McClendon, Bayliss, Lillie, Tashiro,—and even this long list is not inclusive, as the number of investigators in this field is constantly increasing. New fields of investigation have been opened which are called 'biophysics' and 'biochemistry'; but however they may be designated, they signify simply that biologists and physicists alike are seeking to discover and to understand how the universal laws of physics and of chemistry govern biological phenomena.

The mechanical and physical aids which medicine owes to physics are too numerous for more than brief mention here—one need merely state as outstanding examples the microscope, the electrocardiograph, the cystoscope, the ophthalmoscope, etc., which have so far extended diagnostic and therapeutic possibilities. To the science of physics we owe our understanding of the mechanics of the circulation of the blood and the interpretation of the sounds elicited by auscultation and percussion. To the science of physics we owe the development and all the achievements of radiology—the discovery of radium and of its effects upon different media, and the development of methods for its application to the organism and for the preparation of radium emanations. Physicists developed the x-ray, first for diagnostic purposes only, and later as a highly potent therapeutic agent; and physicists are now studying the effects of the x-ray on biological tissues, while methods for varying and modifying the type and intensity of the rays are being investigated in order that their therapeutic potentialities may be still further extended.

To physics a still newer therapeutic agent should be credited—diathermy—the biological potency of which in turn rests upon a universal

*Commencement address given before graduating classes of the Schools of Pharmacy, Dentistry and Medicine, of the University of Illinois, June 11, 1927.

physical-chemical law, that is, that chemical activity is increased in direct relation to increase in temperature. The organism itself has employed this law in its own strife against microbic invasion, often to the extent of self-destruction. By the controlled application of diathermy this same principle can be directed to any organ or tissue—the result of increasing the temperature of the part being an increase in the chemical activity of its cells, as a result of which infection is combated. Or if the energy of the organism as a whole is at a low ebb, then by passing the high frequency electric current through the body, especially through dominant organs such as the liver—and of this I shall have more to say later on—the organism as a whole is energized.

In cases of hemorrhage and surgical shock diathermy holds a place second only to that of blood transfusion. Diathermy may be applied to any part of the body, but the most convenient and efficient method of energizing the body as a whole is to place a plate on each foot so that the high frequency current, in passing from pole to pole, will pass through the fluids and tissues, converting electricity into heat at the points of resistance—namely, at the boundaries of the cells.

The application of this method is the result of certain findings in the course of biophysical researches which have been in progress for many years. As one phase of these researches, thermo-electric studies of temperature variations in various organs and tissues were made in the belief that since variations in functional activity indicate variations in oxidation; and since variations in oxidation must be manifested by variations in heat production; then if we could measure the progressive changes in the temperature of various tissues and organs under varying conditions, a cue to the relative activities of these organs and tissues would be secured. It was found, first, that the temperature of the brain gives a very accurate indication of the vital capacity of the organism as a whole; second, as had been indicated by previous histological studies and electrical conductivity measurements, that the brain and the liver are intimately associated in all processes which affect the organism as a whole; and third, that when heat is applied to the liver the temperature of the brain rises—the thermo-electric response in the brain *preceding* the thermo-electric response in the liver. We found that the temperature of the liver and of the brain fall simultaneously when the viscera are exposed, the fall in the temperature of the brain being comparable to that which follows the removal of the liver; and, as stated above, we found that the direct application of heat to the liver produces an immediate effect upon the temperature of the brain. It is for this reason, as already stated, that we are applying the diathermy current through the viscera including the liver, both during and after operation in bad risk cases.

The identity of light waves with electricity has been established by the physicist. The clinical effects of the application of the sun's rays directly to the organism has repeatedly been demonstrated, in particular by its effect in general infections such as tuberculosis—to cite an outstanding example—or in localized infections, as was repeatedly demonstrated during the war. Based upon this knowledge of the nature of sunlight radiation and its effects upon living organisms, both plant and animal, physicists have developed the Alpine or the quartz mercury lamp by means of which the effects of exposure to the sun's rays may be reproduced. The use of the quartz or Alpine lamp has been found effective in cases of lowered resistance, and use has been made of this principle in the treatment of anemic or cachectic patients whose general resistance has been lowered by prolonged, wasting disease. That is, as the physicist has shown that the sun is the origin of all radiant energy, the physician has in turn been utilizing the energy thus created by applying to the human organism either the direct rays of the sun or the artificial but equally effective rays from the quartz or Alpine lamp.

That the cells of the body are immersed in electrolytic solutions, and that a supply of certain electrolytes must be maintained in the organism, has long been known. The exact function of these electrolytes and how the proper balance between them is maintained in the organism is not yet fully understood, although much light has been thrown upon this problem by the investigations of Macallum, Lillie, Meyer, Clowes, Loeb, Osterhout and others. That sodium, potassium, and calcium ions are essential to the maintenance of life is known; and

that an imbalance among them may produce disease, exhaustion, and death is also known. For an understanding of the function of these electrolytes and the identification of the mechanism whereby the balance between them is maintained the physician again must look to physics and chemistry. The chemist can and has determined the normal constituents of the body fluids, and the physicist must determine their action and interactions within the body. Researches are now in progress whereby it is hoped that the mechanism for the maintenance and mobilization of the sodium ions in particular may be determined.

Mathews, Menten, Crozier, Loeb, Beutner and others have made investigations which show that the acid-alkali balance of the organism has a vital significance. That this is true has long been indicated by cytological studies which have shown variations in the differential stainability of the nucleus and cytoplasm of the cells of the organism—of the central nervous system in particular—in the varying stages of activation from hyperstimulation, on the one hand, when the differential stainability is increased, to exhaustion and death, on the other hand, when the differential stainability is lost. Very recently the biophysicist has again confirmed the interpretation of these cytological findings, for by microscopic dissection Chambers has succeeded in measuring directly the acid-alkali relation of the nucleus and the cytoplasm of the ameba; and he is now extending his investigations to similar measurements of different tissues of multicellular organisms.

On the basis that the activity or the vital capacity of any organ or tissue may be determined by electrical measurements—of conductivity and capacity, in particular—an attempt has been made to apply these physical measurements in the study of cancer. In our original research the electrical conductivity of over 200 sections of malignant and benign tumors of various organs and tissues was measured and it was found that the greater the degree of malignancy, the higher the conductivity of the tumor. In a later study the electrical capacity of cancerous tissue was measured and it was again found that, almost without exception, the greater the malignancy the greater the electrical capacity of the tissue; and—of especial significance, that after radiation malignant tumors have a very low order of capacity. Very recently measurements of the electrical capacity and conductivity of a normal and of a malignant breast in an inoperable case have been made *in vivo*, and the capacity of the malignant breast was found to be more than 10 times greater than that of the normal breast, while the conductivity of the cancerous breast was more than three times higher than that of the normal breast.

Moreover, after the injection of adrenalin the conductivity and the capacity of the normal breast were markedly increased, whereas the conductivity and capacity of the cancerous breast were markedly decreased. These findings, the interpretation of which cannot be offered at the present time, indicate the possible development of a new method whereby to determine the degree of malignancy and in consequence the prognosis in certain cases of cancer.

The mechanism whereby the variations in electric capacity are maintained is indicated by researches which were initiated in the laboratories of the Cleveland Clinic Foundation in collaboration with Dr. Hugo Fricke, who found that the film which surrounds the red blood corpuscles is of the order of 4/10,000,000 of a centimeter in thickness and has an electric capacity of a high order, i.e., 0.8 microfarads per sq. cm. On the basis of this finding we feel justified in assuming that the lipoid films which surround each cell, each nucleus, each spherule within the cells have a high capacity. Experiments are now in progress whereby it is hoped that the internal conductivity of the cells will be determined; and from these three factors, the total conductivity of the tissue, the internal conductivity of the cells, and the capacities of the tissues, an indication—and perhaps an actual determination, of the variations in the potential of the different organs will be determined—a point of the highest significance.

Up to the present time our knowledge of the therapeutic action of drugs has depended principally upon clinical evidence. By the application of physical methods of measurement it may be possible to determine what organs and tissues are primarily affected by drugs, and to what extent their therapeutic action may be controlled and extended. Biophysical researches in this direction have already been made in the case of adrenalin, hydrochloric acid, sodium bicarbonate, strychnin, morphin, bromids,

atropin, caffein, and alcohol, the findings of which cannot be reported here because of lack of time, except to say that in each case the effect of the drug upon the organism as a whole appears to bear a direct relation to its effect upon the electrical conductivity, capacity and temperature of the brain and of the liver. Undoubtedly in the future the pharmacologist in his investigation of the potency of various drugs will add these physical methods of investigation to his armamentarium.

The advance already made in the application of the physical sciences toward the solution of the nature of life justifies the belief that some day we shall be able to create structures resembling living protoplasm in the sense that such structures will be capable of executing some of the reactions of living cells.

It is inevitable that the future trend of progress in the biological sciences in the fields in which you are to play a part—dentistry, pharmacy, and medicine—must be toward methods of physical investigation. The instruments of precision which you will use have been developed by the physicist, and for the interpretation of the laws which govern the action of those instruments you must also turn to the physicist.

The rôle of the physicist, as Millikan has stated, as of all workers in what is called the field of pure science, is to spend his life in trying merely to ferret out nature's secrets and to better man's understanding of her laws. "For, in the final analysis, the thing in this world which is of most supreme importance, indeed the thing which is of most *practical* value to the race, is not, after all, useful discovery or invention, but that which lies far back of them, namely, 'the way men think'—the kind of conceptions which they have about the world in which they live and their own relations to it. It is this expanding of the mind of man, this clarifying of his conceptions through the discovery of truth which is the immediate object of all studies in the field of pure science. Behind that object, however, is the conviction that human life will ultimately be enriched by every increase in man's knowledge of the way in which nature works, since obviously the first step in the beneficent control of nature is a thorough understanding of her."

Let me add to this statement by Millikan that it behooves the rest of us to take these findings of the investigators in the field of pure science and to carry them further, each of us into his own field, in order that the laws which govern the effectiveness of the measures we employ may be extended; and, moreover, that by the investigation of the operations of the laws of physics in the human organism we may progressively extend our knowledge of the phenomena of life to the extent that the laws governing the phenomena of life may be better understood and that our value as dentists, as pharmacists, as physicians may be proportionately extended.

You are indeed fortunate to be entering upon your careers at this time when the art and science of medicine is rapidly attaining the status of an exact science. With this tendency toward increasing scientific accuracy in all divisions of the medical field there may be a tendency away from what may be termed the human side of your professions. To be humane in the true sense of the term does not mean that one need be less scientific; to be exact in his investigations and in the application of scientific facts does not mean that one need be less humane. Intellectual honesty and scientific accuracy combined with the spirit of service to humanity should be the foundation stone upon which to build your future careers.

Auspicious is this day of your beginning—the day of the triumphal return of Lindbergh which typifies a golden age in the union of science and character.

May I close with a warm welcome to you to the ranks of these professions which you are entering and extend to you the wish and hope that your fine ambitions will be realized in fullest measure.

SOME DISEASES OF THE SOFT TISSUES OF THE MOUTH, WITH DIFFERENTIATION BETWEEN THOSE OF PRIMARY AND THOSE OF SECONDARY ORIGIN*

THOMAS L. GILMER, M.D., D.D.S.,
CHICAGO

It is not generally recognized that to the square inches involved, the mouth contains a greater variety of diseases than any other region of the body. Therefore, since the mouth is the

*Read before a joint meeting of the Chicago Medical and Dental Societies, January 26, 1927.

dentist's field of observation and care, he should, as far as possible, be informed regarding these diseases. It is not possible to discuss in a paper of this kind all of the diseases of the mouth. If your attention is called even to a few of the most important ones, their discussion must of necessity be cursory.

It is true, as Dr. Pusey once said, that the mouth is a field where dermatology and stomatology overlap in a very intimate way; this is likewise true of rhinology, though in a less degree.

For convenience, oral diseases may be divided into three groups. First, those which are specifically primary in the mouth; second, those constituting part of the picture of an extra-oral disease with secondary manifestations in the mouth; third, those which may be either primary in the mouth or of an extra-oral origin.

In the first group mentioned we have as one of these primary oral lesions aphthous stomatitis, commonly called thrush, usually occurring in infancy, but as Osler says, occasionally being found in the mouths of debilitated adults.[1] It is a parasitic disease supposed to be due to the fungus Oidium or Saccaromyces albicans. The aphthe are shallow ulcerations covered with white films, found on the fauces, the soft palate, gums, tongue, and other parts of the mouth.

Another primary oral disease is acute ulcerous gingivitis, first described and named by the writer in 1906.[2] It is called ulceromembranous gingivitis by Weaver and Tunnicliff, and by others "trench mouth." Occasionally it is called Vincent's disease and by some, very improperly, Vincent's angina.

This disease was very uncommon before the World War. One might not see a case in a large practice in many years. Our soldiers contracted it in France and on returning to this country spread it widely. It is an ulceration of the gingival borders of the gums, usually appearing first about the necks of the incisor teeth, later about all of the teeth. If one suffering from pyorrhea contracts this disease the ulceration extends rapidly toward the apices of the teeth, causing them to become loose, and as a result they are frequently lost. The disease appears as rather deep ulcers but rarely involves the bone. The ulcers are overlaid with a gray-ish-white film, similar to that found covering syphilitic mucous patches. When this covering is removed, a raw surface is exposed which is extremely sensitive to touch. Salivation accompanies and generally the submaxillary lymphatics are involved. The patient usually has a slight rise in temperature and frequently is melancholic. The appetite is diminished and food is taken with difficulty, owing to the sensitiveness of the ulcers. The breath is always fetid, due to the bacillus fusiformis and spirilla, which Dr. Ruth Tunnicliff positively demonstrated to be the cause of the disease.[2]

Another allied disease is Vincent's angina, found in the tonsils and fauces. It is due, as is acute ulcerous gingivitis, to Vincent's organism, the fusiform bacillus and spirilla. It has many of the characteristics of the gum disease just described.

The anerobe, bacillus fusiformis and spirilla, growing symbiotically with the hemolytic streptococcus are found in those infections occurring at the angle of the jaw, floor of the mouth, and in the submaxillary gland region, causing a hard, brawny swelling, a cellulitis known as Ludwig's angina.

Herpes labialis, commonly called cold sores or fever sores, is a disease of the lips too well known to need description. A counterpart of this disease is found in the mouth and is called canker sore. The mouth lesions are small, superficial ulcers, with well defined margins very sensitive to touch. It is believed that fever sores and canker sores of the mouth are etiologically the same; that is, a neuritis of toxic origin in the peripheral terminal nerves of the affected parts. The mouth ulcers are called herpes simplex. Some individuals are more subject than others both to herpes of the lips and to canker sores. It is not uncommon to see a crop of herpes of the lips following dental operations, due, not as the patient often thinks, to infected instruments, but in reality to slight trauma resulting from the stretching and injury of the parts.

Diphtheria, an acute infectious disease, attacks the tonsils, throat and lips and other parts of the mouth. This disease is caused by the Klebs-Loeffler bacillus. It is indicated by a white, false membrane covering the parts involved. It

1. Modern Medicine, Vol. III, p. 46.
2. Dental Review, May, 1906.

2. Tunnicliff, Ruth. Fusiform Bacilli and Spirilla. Journal of Infectious Diseases, April, 1911.

is very toxic, but is amenable to antitoxin treatment if taken in time.

Lichen planus is not infrequently seen in the mouth. It appears, Pusey states, "as inflammatory papules with a grayish surface, like points that have been touched with nitrate of silver."

Purpura hemorrhagica is seen as ecchymoses in the mucous membrane coverings of the mouth which do not disappear on pressure. Hemorrhages may accompany the disease. Purpura of the skin may or may not precede the mouth symptoms. Purpura is seen secondarily to such diseases as scarlatina, variola, and other diseases having skin symptoms. It occasionaly causes sloughing of the mucosa.[3] Holt reports one case in which the soft palate was destroyed by this disease.

Primary tuberculosis of the mouth is rare. I have seen but one case that could have been definitely of primary oral origin. It is usually found secondary to pulmonary tuberculosis, or the mouth involvement is transmitted through continuity of tissue from lupus of the skin adjacent to the lips. I have seen but two other cases of tuberculosis in the mouth and in those the diagnosis was easily made from the fact that the patients were definitely tuberculous. Tuberculous ulcers of the mouth are distinguished from syphilitic ulcers, since the former are extremely sensitive to touch and have rough edges, while syphilitic ulcers are less sensitive and have well-defined thickened margins. Moreover, tuberculous ulcers do not respond to antisyphilitic therapy.

The primary expression of acquired extragenital syphilis is found on the lips, tip of the tongue and pharynx. In these locations chancre may appear first as a papule, which ulcerates. Indurated neoplastic areas surround the chancre. The lymphatics, submental or submaxillary, whichever are associated with the area infected, are soon involved, enlarge and become indurated. Multiple chancre is rare in the mouth, but is sometimes seen and is due to two or more infections at the same time.

When chancre of the lips and tongue becomes eroded and ulcerates, it enlarges and may simulate in appearance epithelioma, but the much more rapid growth of chancre, together with the earlier involvement of the lymphatics, the age of the patient and the absence of the characteristic odor of ulcerating carcinoma, serve to aid in differentiation. In case of doubt, the Wassermann test, the microscope and antisyphilitic therapy will give a positive differentiation. Up to about the sixth to twelfth week after the appearance of the chancre the physical condition of the patient may remain normal. Then the secondary stage, if no treatment has been instituted, will appear and is indicated by a fever and rash, or the rash may precede the fever. Simultaneously with the rash and fever mucous patches occur either on the lips, tongue, soft palate, and the inner surface of the check, or, indeed, on any part of the mucosa of the mouth, regardless as to whether the disease originates primarily or secondarily in the mouth. Mucous patches also differ from canker sores in that they have more clearly defined margins and are not so painful to touch, and the immediate area is not so hyperemic.

There are other infections which are primary in the mouth, but more cannot be included in this paper.

Other distinctly primary oral diseases are the neoplasms. Among the most common of these is the so-called epulis, a benign fibrous tumor, usually pedunculated, generally seen on the gums, in the labial region of the jaws. It springs from the connective tissues of the periosteum or peridental membrane. It grows to considerable size at times and should be removed, since it may become malignant.

Angioma is found in the tongue and other parts of the mouth. It is also a nonmalignant growth, bluish, made up principally of enlarged veins of lymph vessels. Since this neoplasm grows to large size, it is subject to injury on mastication and, therefore, should be removed early. Occasionally serious hemorrhages follow injury of these growths.

Another nonmalignant tumor of the mouth, called a mixed cell tumor, is found in the tissues overlying the hard palate and in the soft palate. It is a smooth, rather hard, encapsulated growth, unilaterally placed, composed of salivary, glandular and other tissues. It does not break down and ulcerate as does the gumma of syphilis.

Another nonmalignant growth, an exostosis, which under the title of this paper should not properly be enumerated, since it has been mis-

3. Diseases of Infancy and Childhood.

taken for a malignant neoplasm, is given for differentiation. It is found in the median line of the hard palate and on the lingual surfaces of the mandible in the bicuspid region. It may grow to considerable size, but does not require removal unless the mouth becomes toothless and therefore demands artificial dentures. In such a case, if the growth is excessive, its removal may has been excessive shrinkage of the alveolar process, the ill-fitting plate irritating the soft be necessary.

Papillomata are found in the soft tissues overlying the hard palate, on the buccal mucosa and on the tongue. These growths are small and resemble warts of the skin. They should be removed, since as a result of irritation to which they are constantly subject it is supposed that they may become malignant.

Hyperplasias caused by ill-fitting artificial dentures are not uncommon. They are usually seen on the upper jaw, following long-continued use of temporary artificial plates, where there tissues and causing hyperplastic growths. All such growth should be removed and the patient supplied with perfectly adjusted plates.

Aneurysm of the posterior palatine artery is occasionally seen and mistaken for an alveolar abscess. The writer once saw a case in consultation which had been lanced by the patient's dentist, he supposing he was dealing with an abscess. Instead of finding pus when the tumor was lanced arterial blood spurted from the distended artery. To differentiate between an abscess and an aneurysm, make pressure distally to the tumor. If the tumor decreases in size an aneurysm is indicated. If the finger is placed on one side of the enlargement, the thumb on the opposite side and pressure made, a pulsation will be felt which not only raises the thumb and finger, as in the case of an abscess, but perceptibly separates them. To differentiate positively, aspirate a part of the contents of the enlargement.

We turn now to the discussion of malignant growths, which rank high as the cause of death. Statistics show that nephritis ranks first, cardiac diseases second and cancer third in their fatality. Dr. Wood of Columbia University, in a recent address before the Chicago Branch of the American Association for the Control of Cancer, said that physicians are often derelict in their duty to their patients' welfare in treating lightly certain lumps in the breasts of women and growths in other parts of the body of both sexes, since early removal of such growths is the only safeguard in the control of cancer. This applies equally to the dentist who, I fear, does not always scrutinize every part of his patient's mouth to discover whether there may not be conditions which, though not malignant at the time, may become so. If he does not feel that he is qualified to judge of the nature of the abnormal condition found he should send the patient to one who is qualified. All new growths should be considered precancerous, sinec it is well known that early removal of cancer means a permanent cure, while delay means much suffering and death. Blair[4] says it is generally conceded that in cancer, if removed thoroughly in its incipiency, practically 100 per cent. cures should be expected.

Not long since I saw a patient whose dentist had treated him for pyorrhea because the teeth were loose and the gums inflamed. When I saw the patient carcinoma had so far progressed that the cervical lymphatics had become involved, and he died. Had the disease been recognized early a life might have been saved.

Two malignant growths of the mouth are carcinoma and sarcoma. With rare exception, carcinoma of the mouth is found only in individuals beyond middle life, while sarcoma may occur at any age. It is not possible to picture either of these growths in words. They must be seen often for recognition, and even then mistakes may be made in diagnosis. The microscope and a Wassermann test may be necessary for differentiation.

Carcinoma may attack any part of the epithelial tissues of the mouth. Most of the cases I have seen seem to have originated at the sulci at the duplicature of the mucosa and gum. Leukoplakia lesions on the tongue or other parts of the mouth tend to become carcinomatous. When a carcinomatous growth has attained some size it tends to assume a cauliflower appearance. When it ulcerates it has a distinctive odor, and the patient generally experiences much pain. The cervical lymphatics sooner or later become involved, either from the infection or in secondary carcinomatous growths.

4. International Abstracts of Surgery, February, 1916.

Sarcoma of the mouth, except in connection with the bones of the jaws and periosteal tissues, is uncommon. The spindle cell and round cell sarcomas are malignant, while the giant cell or myeloid growth is not malignant in the sense that it causes metastasis. The more rapidly growing carcinomas and sarcomas are the most malignant.

While cysts are not, strictly speaking, tumors, they should be mentioned in this connection. Two kinds of cysts are found in the mouth, the mucous and the dermoid. The most common of these is the muciperous cyst of the lip. It is a retention cyst appearing as a bleb filled with transparent mucus, caused by occlusion of the mucous ducts. It is so distinctive in appearance that it cannot be mistaken. It is about the size of a pea. A simple puncture of the cyst wall evacuates its contents and causes it to collapse, but unless the mucous gland connected with it is dissected out it soon fills again.

Ranula is a cyst in the floor of the mouth, generally unilaterally placed. It is not, as was once supposed, due to obstruction in the duct from the submaxillary or submental glands, but to atresia of the ducts from the mucous glands in the floor of the mouth. It is similar in appearance to muciperous cysts of the lips but becomes much larger.

Another mucous cyst of the mouth is found on the under surface of the tongue in the median line just back of its tip. It is likewise a retention cyst due to the occlusion of the duct from Blandin and Nuhn's gland. These are extremely rare.

Dermoid cysts are found in the floor of the mouth, and are probably due to fetal inclusion of epidermal tissues. Those I have seen contained only thick, sebaceous matter which, having no normal outlet, causes the formation of a cyst which increases in size with the increase of the sebaceous material. Occasionally these cysts contain hair. Palpation of a dermoid cyst gives a different sensation from that felt when a ranula is touched. The latter feels like a small, thin tissue bag filled with water, while a dermoid cyst feels more like a similar bag filled with soft putty. On removal of the finger from a dermoid cyst a depression remains where it was touched.

Calcareous deposits are not infrequently found in Wharton's and in Stenson's ducts. They are discoverable through the use of the probe by palpation or the roentgenograph. They should be removed, since they may occasion infection in the duct, especially if the concretion has a rough surface.

Many extraoral diseases are reflected in the mouth. For instance, syphilis, the Koplik spots of measles on the buccal mucosa, the strawberry tongue of scarlet fever, and some erythematous diseases, such as smallpox, chickenpox, etc. Ulcers in the mouth generally accompany pernicious anemia, and if no other cause for them is found then pernicious anemia should be considered in seeking a cause for them.

Sprew, a tropical disease, is occasionally seen in more northerly latitudes. Ulcers similar to those accompanying pernicious anemia are found in the mouth in connection with this disease.

Secondary oral manifestations of syphilis or mucous patches are most commonly seen in the buccal mucosa and fauces. The ulcers are overlaid with a grayish-white film. The margins are well defined and slightly elevated, differing from tuberculous ulcers of the mouth which, as stated before, have roughed edges—"mouse gnawed," as they are designated. They are less sensitive to touch than are tuberculous ulcers.

Among those diseases which may be either primary or secondary in the mouth are chancre of syphilis, and occasionally gonorrhea. From more recent writers I have observed that lupus erythematosus and other erythematous diseases may not easily be differentiated from pemphigus and syphilis. Early symptoms of pemphigus are seen in the mouth as bullae, and these coalesce, with desquamation of the surface epithelium. It seems probable from the literature and from the few cases the writer has seen that the oral symptoms of pemphigus are probably a part of a picture of a general disease. An exception may be made in that form of the disease known as pemphigus vegetans, which, according to Goadby, occurs on the lips, gums, and other parts of the mouth as small whitish or reddish bulbous plaques. He says,[5] "The base of the patch becomes edematous, thickened and inflamed, and covered with an offensive viscid secretion."

5. Goadby: Diseases of the Gums and Oral Mucous Membranes. Journal of Dermatology.

Pemphigus is generally recognized as a disease with bad prognosis.

A tertiary oral manifestation of syphilis is the gumma, which is most commonly seen as nodes in the hard and soft palate and tongue, which later break down from ulceration. If the primary disease is not checked by treatment, the ulceration may destroy not only the soft tissues involved, but the bones of the upper jaw and nodes as well.

There are two conditions found in the mouth called leukoplakia which experience leads me to believe are different, both clinically and etiologically. True leukoplakia appears as dead white, rather hard patches with definite outlines, which are permanent, while in the other disease the patches are less white and are diffused generally over the tongue, floor of the mouth and oral mucosa. The latter is more like a film than the condition found in true leukoplakia. It is transitory, disappearing without treatment.

Primary and secondary diseases of the tongue are so numerous that a book of many pages would be required to do justice to them. Indeed, a book of 383 pages was written many years ago by Butlin and is still a classic on that subject. Glossitis is a word applicable to a multitude of tongue diseases.

Black tongue, hairy tongue, geographical tongue, Moeller's glossitis, are only a few of the numerous diseases of the tongue. The tongue often reflects gastrointestinal disturbances and other diseases. Formerly the physician having no laboratory assistance had to employ other means as aids to diagnosis. The tongue was then universally examined. Tongue and gum examination may still be helpful if properly studied.

The gums are subject to a variety of changes and diseases. Except from those conditions due to lack of personal care, calcareous deposits, sharp edges of broken teeth, clasps of partial dentures, and poorly fitted orthodontic appliances and bad proximal tooth contours, gum changes are usually secondary to other diseases.

Dietary insufficiency, as shown by the lack of certain vitamins, is notably illustrated in scurvy, and this deficiency without doubt causes other gingival diseases. Metallic poisons, such as lead, bismuth and mercury, are well known causes of inflammatory changes in the gums. Pregnancy in its later stages, especially if albumin is found in the urine, is frequently accompanied by gingivitis. If an epulis exists at the time of pregnancy, the tumor takes on the same swollen, hyperemic condition existing in the gums. After parturition, the gum symptoms subside and the tumor decreases in size.

Gingivitis of the gums, although unlike the congested condition associated with pyorrhea, is often mistaken for that disease, and unsuccessfully treated as such. It appears as a brilliant red, inflamed condition at the gingival border, bleeds on being touched, but does not involve the peridental structures. It may be found even in the mouths of those who are careful of mouth and tooth hygiene. Blood examination and urinalysis give no clue to the cause. Dietary changes have been helpful in some cases, but so far as the writer has been able to discover, no definite cause or cure for the condition has been found. Here is opportunity for research.

RADIO-TRANSLUCENT FOREIGN MATERIAL IN THE LARYNGO-TRACHEO-BRONCHIAL TREE*

EDWIN MCGINNIS, A.B., M.D.
CHICAGO

The word radio-translucent I am using in the sense that the light rays of the x-ray machine pass through the objects without sensitizing the plate, that is, without casting the shadow that would make the obstructing object visible in an x-ray picture. Pennies, telephone slugs and other metal objects are, of course, not radio-translucent. Their presence in the bronchial tree is readily registered on the x-ray plate. But other objects, many of them vegetable in nature, may be said to be radio-translucent, in that x-ray light rays pass through them and so leave their presence undiscovered.

Differential diagnosis is sometimes difficult. Therefore the experience of the physician is a great determining factor. Some of the mistaken diagnoses that come to mind are: spasmodic laryngitis, laryngeal diphtheria, edema of the larynx, asthma, asthmatic bronchitis, acute and chronic bronchitis, and even pneumonia.

A number of cases of opaque objects, such as bits of egg shell caught in the larynx between and parallel to the vocal cords have been ob-

*Read before the Chicago Laryngological and Otological Society, March 7, 1927.

served. Also cases with thin pieces of chicken scapula. Small thin flat buttons have also been the offending objects. These produce very little obstruction to breathing, but in babies the crying voice is altered; and in one case the youngster seemed unable to make an audible cry.

Some times these opaque objects are sharp fish bones stuck into the laryngeal mucosa; in other cases the object slips through the laryngeal chink and gets into the trachea. In this situation if the object is large obstruction symptoms are present, difficulty in respiration and cyanosis. Nuts, prune pits, kernels of corn, beans, peas, glass and other types of beads, and even particles of food are liable to be in situ. An aid in the diagnosis in this situation is the noise of the object sliding up and down the trachea. Jackson has called attention to this. Tracheal location does not produce much variation in physical findings in the chest unless the object has been pulled more into one main bronchus than into the other. Mistakes in diagnosis have been made even in the best regulated of hospitals, as evidenced by the following case. Youngster had had access to some pistachio nuts and one of these evidently slipped into the trachea. The accident was forgotten or not noted by the parents. Child was admitted to the hospital for observation, and was around about a week. Coughing spells and occasional respiratory crises were present. Nothing much was thought of this until one afternoon the child had a sudden permanent respiratory obstruction and crisis was at hand. Tracheotomy was performed without relief to the breathing, and the child died. Post mortem revealed a pistachio nut wedged into the bifurcation so tightly as to completely obstruct air flow. This was an emergency where experience in this work would have helped.

When round objects are inspired which are small enough to slide into one main bronchus or the other they usually come to rest in the lowest possible point. In this case physical findings and symptoms will be one-sided. If the object is of a nature to swell it will ultimately shut off the entrance of air into the main bronchus. The breath sounds will be absent, and if the object remains long enough the lung will collapse. I have seen cases of lung collapse which were also due to an excessive amount of thick mucous caused by the presence of peanut particles in the bronchi. There have been other cases in which I am sure that the thick gelatinous-like content of a chronically infected antrum of Highmore was inspired during an operative anesthetic, and obstructed a main bronchus.

Blood clot following operations on the nose and throat could also be inspired and close off part of the bronchial tree. I have seen two such cases.

If the inspirated object just about fits into a terminal lobe bronchus it will shut off the air entering a lobe. This is common in the lower lobe bronchi.

I have had it proved that a careful history is important because in giving it the statement of the accident usually comes out. The individual has usually been perfectly well up to a certain time. Chest x-ray as we have seen cannot in cases of opaque objects give much information, and one should not, therefore, be misled by the absence of x-ray evidence. Diagnostic bronchoscopy, however, usually aids in the diagnosis and cure of the individual. .

A few recent illustrative cases will bring out vividly some of the points.

Case I. A youngster about four years old had been seized with a sudden choking spell while feeding the chickens corn. She ran to her mother in her difficulty and was rather cyanosed at the time. Cough and cyanosis subsided, but within twenty-four hours spasmodic cough commenced. Cough became productive and during a period of three weeks several physicians examined her and x-ray pictures were taken. At last the possibility of something in the bronchus was thought of and she was sent in for examination. The prominent thing in the history was that the mother said "she was perfectly well until that day, and she was shelling an ear of corn to feed to the chickens. Since then she has been sick with a cough and has lost a good deal of weight." Physical examination of the chest revealed moist rales limited to the right chest. Bronchoscopic examination revealed a white dent kernel of corn in the right main bronchus. This was removed with forceps, and child made a good operative recovery. Letter two months subsequent from child's mother stated that her daughter made a prompt permanent recovery and regained all her lost weight.

Case II. Boy about three years old, while eating a luncheon consisting of a piece of bread, one pickle and small amount of meat, suddenly strangled, and after a severe fit of coughing seemed to be relieved of his tracheal obstruction. The next day an occasional cough developed. Pediatrician was called in, who suggested x-ray examination. This was deemed negative. Youngster was under observation for about two weeks as he still had his chest upset. Consultation with a laryngologist who had had a good deal of experience resulted in the diagnosis of foreign body in

the right main bronchus. He was sent in to me for bronchoscopic observation. The morning he landed in Chicago he broke out with a measles rash and we had to send him to a contagious hospital. I saw him about every day until his convalescence, and one day I discovered that the attending physician was looking upon this boy's chest condition as a measles bronchitis. About the time of dismissal from the hospital he sprang a rather high temperature and a foul smelling productive cough. An immediate bronchoscopical examination revealed a small hard object in the right bronchus. On removal this proved to be a piece of bone. Aspiration of a large amount of foul mucopurulent secretion was done at the same time. One dose of neo-arsphenamin cleared up the odor, and the lad made a rather rapid recovery.

Another case of aspiration of a kernel of corn was first treated as a laryngeal diphtheria with a rather large dose of antitoxin. Youngster had a rather severe serum reaction with quite a little laryngeal edema. Removal of the offending object helped some in the relief of the youngster's breathing. Laryngeal and tracheal swelling became more pronounced, and the house surgeon who had had a good contagious service intubated, and carried youngster along for thirty-six hours then he extubated but the youngster could not carry on without the tube. I did a low tracheotomy with marked relief.

In conclusion, adults, young children and infants especially are prone to put things into their mouths. In the vast majority of cases this has no ill effects, but occasionally the blast of inspired air carries the object into the air passages. The accident with its accompanying symptoms of cough, difficulty in breathing, sometimes transient cyanosis are noted by the individual and attendants, and should never be passed over lightly by the attending physician.

101 South Mich. Ave.

THE NURSING SITUATION A NATIONAL PROBLEM*

W. F. GRINSTEAD, M. D.
CAIRO, ILL.

Mr. Toastmaster:

When I met our indefatigable secretary, Dr. Camp, down at Washington, D. C., week before last, at the A. M. A. convention, he fed me up in advance on the President's banquet to be staged at Moline this evening. My mind immediately reverted to the subject of my Presidential address at Springfield in 1921. When I got home I looked up a reprint from the ILLINOIS MEDICAL JOURNAL to freshen my memory of what the burden or backbone of that address was based upon. I found it was the nursing situation. Now we are six years away from that occasion and the nursing situation still looms big in the profession and in the hospitals. There is no doubt but that the nurses have organized strongly to control the hospitals and to enforce their fee bill. Now we have to have nurses, we have to stand by them and we must work out this problem in a spirit of fairness. While the nurse is tremendously close to the doctor, the patient must always have his first consideration. There would be no demand for nurses, doctors nor hospitals if there were no patients. In our State Journal in the last few months, there has been much good practical work reported in an attempt to solve this problem. We are not worried about the rich patient. We are not worried about the very poor patient. The very best hospital and medical service are available to them; but it is the great middle class, the best people in the world, which we are concerned about and must protect.

I believe it will interest some of the audience and not bore the remainder of it if I quote a brief excerpt from my Presidential address which follows:

THE NURSING SITUATION

The Doctor's best friend and the patient's *next* best friend is his nurse. . . .

Several years ago I determined to saddle upon myself the self-imposed task of attempting to organize a training school for nurses in a hospital of about 75 beds at that time; but now building for a capacity of 115 beds in a city of about 15,000 people. . . .

I found I had an up-hill pull. Our only hospital open to all classes and occupations of people was owned and operated by an order of Sisters who were faithfully doing the very best they knew but not one of them had ever seen a training school for nurses and, therefore, not profoundly impressed with the advantages of a training school education for nurses. I made practically no progress for a few years. Finally I went down to New York for some post graduate work and sought the acquaintance of an unusually capable superintendent of a large training school for nurses who was good enough to sacrifice much of her valuable time in telling and showing me the salient features of the practical operation of a training school for nurses. Following these conferences I sent her to the book stores to select a full set of books on all the branches taught in the best training schools. These

*Read by Title at Past Presidents' Banquet, Illinois State Medical Society, Moline, Ill., June 1, 1927.

were boxed and shipped at my expense to St. Mary's hospital, Cairo, Ill. When they were opened up our Sisters read them eagerly and were soon co-operating with me enthusiastically in the organization of a training school for nurses which is now an established, going, successful school.

This experience with the added exigencies of nursing created by the world's war have firmly impressed some lessons upon me that I hope to see worked out practically in solving the nursing problem.

Not only the medical profession but the lay public have been familiar with the scarcity of competent nurses and their fees for service that placed them beyond the reach of people of moderate means. Even some of our hospitals have been almost begging for nurses. The situation has grown intolerable and a remedy must be found. Let me give you an example from my personal observation. Some young people, married less than two years, were on the anxious seat over the prospect of their first baby. Like many young married people they were not abundantly financed but were determined to draw liberally upon their small bank account, or even their credit, for the safety of a trained nurse. They appealed to me to assist them in securing this service. On the afternoon of the same day of the appeal, I chanced to see three trained nurses having a little group conference. I interrupted them to lodge the above appeal with them. One of them, acting as spokeswoman, named a price that surprised, not to say provoked me. A few days later I was supplied with a fee bill that had been adopted by these young women that announced $60 per week for obstetric nursing. Now, candidly, how many families have you gentlemen on your list, in general practice, who can afford to add this to the other expenses incident to the arrival of a new baby? Now it just happened that my colleagues and myself had donated our service in helping to educate these young women who had been admitted from families of middle class people, who are the best in the world, and whose parents had been able to give them a high school education. I don't need to tell you about the talk they put up in justification. It is the old story of human nature in humanity. No class of people is more popular with me than the trained nurse and it really distresses me to see them put themselves out of business, as they surely do, by such uncharitable methods.

Some of them are now heaping anethemas upon me because I pointed out their error and aligned myself on the side of the sick and injured and with our good women who assume the noble duties and responsibilities of motherhood.

We have all noticed the modern tendency of organized nursing toward a nursing aristocracy. . . .

At our training school many fine young women have inquired about the terms of admission, who had finished grammar school. They were turned away because we would not be allowed on the approved list if we accepted them. We wanted to be respectable. We wanted to measure up to the standard that had been pointed out to us. I believe they ought to be admitted. I know we can make splendid nurses out of them. I know we very much need them.

They may not have had lessons in elocution. They may not render eloquent readings, with thrills, for the entertainment of the sick heiress. They may not have had a course in art and therefore not qualified to produce comic drawings for the amusement of sick children; but they will go to the kitchen and prepare their food properly; and they will relieve the sick child and the sick heiress of the vexatious delay in summoning an orderly or pupil nurse to enter or exeunt a commode. If she has good common sense and the enthusiasm to make good in her work, she can be trained to render satisfactory service to doctor and patient. Moreover, she can qualify in two years in a properly equipped and well appointed training school. After she has qualified and has been authorized to enter upon her work, if she decides to specialize in administrative nursing, in obstetric, pediatric or surgical nursing, let her take a post-graduate course of training for that purpose.

As two illustrations of how this subject still looms before the profession, permit me to quote a paragraph from one of the papers presented at the annual conference of Secretaries of State Medical Societies held at Chicago last November. This paper was presented by Dr. D. E. Sullivan of Concord, New Hampshire, and follows:

"The physician's duty to the patient does not end in dressing wounds, writing prescriptions and making professional visits to examine and apply proper remedies, for in the hours between visitations much intelligent care and action is required. This brings one up to the nursing of those in his charge, and in the recognition of the present day trend of withdrawal of so many registered nurses from bedside work to easier berths in the employ of some governmental agency or industrial corporation with shorter hours and better pay; physicians are confronted with a perplexing situation—one that gives pause. It is for this group of men and women representing the medical profession of all the states of this Union to acknowledge the existing state and offer the suitable remedy. Let us physicians not only by resolutions in society meeting deplore the actual conditions but by determined effort inaugurate in the hospitals intensive training with a shortened course for practical nurses or nurses' aids, and provide for the sick a sufficient number of persons amply competent to attend to their ordinary needs for a reasonable compensation. This one accomplished deed will be of inestimable benefit in cementing the bond of union between physician and patient. The House of Delegates of the A. M. A.

at Dallas approved and urged such action; the World War was responsible for the same thought in all sections of the country at that time but little if any efforts have been made to put the plan into effect."

The second illustration you will read in the Presidential address of Dr. Jabez North Jackson before an audience of 6,800 people at Arcadia Hall, Washington, D. C., on the evening of May 17, 1927; 4,000 more people were turned away from this auditorium for lack of room. The doctors and their wives and the laity in Washington were keen to hear the address of the president of the greatest medical society in the world and of the president of the United States.

Referring to the nursing situation in his address Dr. Jackson spoke as follows:

"But what of the situation of that large and worthy class, sometimes called the middleman, ofttimes the finest of God's creatures? A young man of splendid character has completed an expensive education to make him a worthy citizen for a life of valuable service. He has married a fine young woman; maybe my daughter, maybe yours. Perhaps they have been blessed with a splendid child, or possibly two. This young man may some day be a millionaire. Today as an apprentice he receives only a modest salary. With it through much prudent thought and ofttimes denial they are starting a happy and promising family and home. When the necessary monthly bills are paid, however, the bank balance shows little or nothing. The wife is stricken with an attack of acute appendicitis and operation is required. Her case is a serious one and the services of a skilled nurse are required—in this day of 'labor hours' in nursing, possibly two, maybe three, each at $8 a day. She recovers and he is happy. But when he calls at the office for his bill and then consults his bank balance he finds he is left hopelessly in debt for a long time to come. He would not accept charity branded as such. He is a man. This circumstance is not due to overcharge on the part of the hospital. It is not due to the expense of medical service. His surgeon waits—gladly and without pressing. He may decline to present a bill at all. It is no criticism of any one. But the problem is there."

In conclusion I beg to suggest, even to urge, every doctor and every nurse in Illinois to read the masterly address of that eminent physician and author, Dr. Hobart Amory Hare of Philadelphia, before the graduating class of the training school of Lankinau Hospital. It bristles with truth in polite but strong language.

You will find it in the March number, 1927, of ILLINOIS MEDICAL JOURNAL. Page 175.

SURGERY OF THE COLON*

CHARLES J. DRUECK, M. D., F. A. C. S.
CHICAGO

Radical surgery of the colon has such a high mortality that it should be advised only when very necessary. By a thorough preliminary preparation of the patient, by performing certain operations in stages, and by a closely watched postoperative management this mortality can be kept down. There is also a wide difference in the mortality following operations for benign and that for malignant diseases. The cecum and the sigmoid are two of the most mobile portions of the digestive tract, and are responsible for many disturbances often referable to the upper bowel. A large movable cecum, using the appendix as a suspensory ligament, causes reflex symptoms often mistaken for gastric ulcer or chronic appendicitis. A long meso-sigmoid may act similarly.

Fixation Operations. Bean[1], who has studied racial types, divides human beings structurally into 1. the thin epithelial, hyper-ontomorph type with a long, vertical stomach, short small intestines, and a long, large intestine, and 2. the robust connective tissue type, meso-ontomorph with a large transverse stomach and a small intestine and short large intestine. He believes each type is prone to particular diseases which occurs only rarely in the other type.

Stockard[2] holds that the one group differs from the other because of an early post-natal development under a different complex of the internal secretions. The hyper-ontomorph child has a high physiological thyroid, is mentally precocious, physically frail and subject early to alimentary disease. Usually has a long narrow chest and a very active nervous system. The meso-ontomorph child has a low active thyroid, grows large in size, particularly in width, and has good digestion and metabolism. A little study of these types demonstrates the futility of fixing certain movable portions of the digestive tract into conceived anatomical locations.

Ileocecal Insufficiency. The ileocecal opening is not a valve but a sphincter muscle which contracts upon stimulation of the superior splanchnic nerves; and its excitor cells are situated in the superior mesenteric ganglion. If the ileocecal insufficiency is due, as it is in most

*Read before the Chicago Medical Society, March 30, 1927.

cases, to a lack of sympathetic control, or perhaps suprarenal insufficiency, then no mechanical device known to surgery can avail. An inflamed appendix or adhesions situated close to the ileocecal sphincter, interfering with its proper contraction may cause loss of tone. Surgical removal of the appendix or adhesions may allow the mucle to functionate properly and return to a normal state.

Appendiceal Fecal Fistula. Deaver[3] reported 4,063 cases of appendicitis with 200 fecal fistulae resulting of which 74 (37 per cent.) healed spontaneously, 97 (48.5 per cent.) were repaired surgically, and 29 (14.5 per cent.) left the hospital without operation. Of those repaired 60 per cent. were closed by inversion of the fistulous opening with a purse string of linen suture, reinforced by an additional suture line. Twenty-five per cent. required resection of the bowel varying from a small portion of the cecum to more than a foot of the terminal ileum with the cecum and ascending colon; 15 per cent. showed such doubtful regenerative power that ileocolostomy was performed.

Obstinate Constipation, with intestinal intoxication, can be so much benefited through medical management of diet, exercise, drinking a large amount of fluid and the use of mineral oil and agar agar that the advisability of surgical treatment here is doubtful except for patients badly handicapped and unable to attend to their usual duties.

Much contention arises as to which portion of the colon is responsible for this stasis, the right half of the colon and the rectosigmoid bowel dividing the responsibility. Roentgenograms of these cases usually show a prolapsed transverse colon with a low lying cecum and a redundant sigmoid loop and these conditions are found at operation.

Good results are obtained by ileosigmoidostomy, but in doing this operation the ileum must be completely divided at the site of the ileosigmoidostomy and both ends closed. The sigmoid is also divided and its proximal end (the distal end of the isolated portion of the colon) is brought out through the abdominal incision to allow drainage of the colon. Unless this is done gas will accumulate in the colon and produce marked distention and discomfort.

The colonic fistula which results from this exclusion operation discharges a small amount of mucus, but no feces, and is amply cared for by wearing a gauze pad to protect the clothing. This operation is much preferable to a colostomy.

Hirschprung's Disease. Megacolon seems to begin in the sigmoid and if not carefully managed dilates and hypertrophies the bowel upward through the colon. In young children appendicostomy or cecostomy may be done for the purpose of irrigating the bowel. In older children a redundant sigmoid with a mesentary a foot long may be found and may be resected after the method of Mikulicz. By resecting the peritoneum of the mesosigmoid the bowel may be lifted out of the abdomen. The two limbs of the bowel are sutured together and the abdominal wall is then closed about the protruding gut. The bowel is opened on the second day and is cut flush with the skin on the tenth day. Clamps are then applied to cut down the partition between the two limbs and the stoma is closed later if needed.

In older patients in whom the entire colon is usually involved and where fecal balls 3 to 5 inches in diameter have been found, a low ileosigmoidostomy with exclusion of the colon from the alimentary canal is better.

The preparation of these patients for operation is important. Several days may be required to break up the impaction at the recto sigmoid junction. After the obstruction is relieved 10 days or two weeks may be required to completely empty the colon. During this treatment the patient is kept on liquids.

Actinomycosis. Actinomycosis in the colon occurs in two forms.

1. The acute form which closely resembles appendicitis.

2. The chronic form which is insidious in onset with slight, vague pains in the right lower abdomen. Later the tumor is recognized.

In both types there is a marked loss of weight and strength and a very severe anemia. The skin over the growth becomes bluish red, breaks open into suppurating points and becomes riddled with fistulae. Constipation rather than diarrhea is the rule.

Treatment. It is usually impossible to remove all the diseased tissue at operation because of the diffuse infiltration. It is best to drain the abscesses, curette the sinuses and ir-

rigate. Give internally large doses of potassium iodide and apply x-ray locally.

Tuberculosis of the Bowel. Tenwick & Dodwell[4] report 80 per cent. of their cases of intestinal tuberculosis as involving the ileocecal region. The disease may be localized or disseminated and occurs in two types, the ulcerative, which simulates actinomycosis, and the hypertrophic form which resembles cancer or occasionally appendicitis.

The more frequent form is the hypertrophic and is characterized by anorexia, digestive derangement, pain in the right iliac fossa, varying diarrhea and constipation, and occasional attacks of partial or complete obstruction. The tumor is hard, somewhat nodular and by palpation is indistinguishable from cancer. Tuberculosis more frequently occurs at an earlier age.

Treatment. The whole area should be removed and the bowel closed with a side to side or end to side anastomosis.

Chronic Ulcerative Colitis. This condition, the etiology of which is not definite, may continue for several years, the patient gradually losing weight and strength and becoming anemic, until finally death occurs. It does not respond to medical management. In the late stages perforation of an ulcer and fatal peritonitis may occur or septicemia. The diagnosis is made from the history, the proctoscopic findings and a roentgenogram examination.

Treatment. A permanent ileostomy is the most satisfactory procedure. Sistrunk[5] cautions against exploring the diseased bowel after opening the abdomen as the organisms in the bowel wall are so virulent that trauma of any sort, even an exploration, tends to produce a fatal peritonitis. Under local anesthesia a low right rectus incision locates the lower ileum. This is cut across at a point 5 or 6 inches above the ileocecal valve. A clamp is left on the distal end of the ileum (nearest the ileocecal valve) and a tube is sutured into the proximal end. The stoma must be permanent because the bowel in healing contracts and its lumen becomes strictured so that it cannot be restored to function. In a few instances purulent material accumulates between the strictured areas of the bowel and produces constitutional reaction which requires colectomy. Resection of the bowel during the active stages of the disease is followed by a very high mortality.

Diverticulitis. Diverticulitis may occur in any portion of the intestinal tract but is rarely seen except in the sigmoid. Most cases are without symptoms and the recognition of such during roentgenologic examinations is without importance. Occasionally a diverticulum in the sigmoid becomes inflamed and produces serious complications which are similar to those of appendicitis but are on the left side. Bloody mucus is also voided per annus.

Treatment. Acute diverticulitis is best handled expectantly with rest in bed and the use of ice bags, withholding surgery at this stage.

Occasionally an abscess develops and requires drainage or it may rupture into the bladder thus producing a vesico-sigmoid fistula.

Recurrent attacks are the rule and should be guarded against by carefully regulating the bowels and diet and by avoiding strenuous exercise.

Resection for diverticulitis has a high mortality. In some cases a Mikulicz type of operation may be performed, but if marked inflammatory reaction of the tissues is present this is dangerous. A temporary colostomy with resection of the bowel several months later is the safest course and afterward the colostomy may be closed.

Cancer. Cancer is the most frequent indication for radical surgical treatment of the colon. In Hoffman's[6] statistics 7.7 per cent. of the male and 11.3 per cent. of the female deaths are due to cancer of the peritoneum, intestines and rectum. Deaver quotes the reports of the Pathological Institute of Vienna of 343 intestinal carcinomas which came to autopsy, 164 were in the colon, 162 in the rectum, 7 were in the duodenum and 11 were in the ileum. At the Mayo clinic from January 2, 1915, to December, 1922, there were 359 cases of cancer of the colon; of which 71 were in the cecum, 44 in the ascending colon, 28 in the hepatic flexure, 50 in the transverse colon, 23 in the splenic flexure, 39 in the descending colon, and 104 in the sigmoid.

Azeman, Maydl, Mueller & Nothnagle[7] reported 511 deaths from carcinoma of the large bowel of which 35 were in the cecum (6.8 per cent.); 131 in the colon (25.6 per cent.); 83 in the sigmoid (16.2 per cent.) and 262 in the rectum (51.2 per cent.).

Estimation of the number of patients presenting themselves for treatment who are suitable

for radical or palliative operation is not so easily learned from statistics because of the wide variation of opinions of different surgeons as to the methods of procedure and the same surgeons differ at times. Thus the Mayo[8] clinic reports of 1910-1913 showed 51 per cent. of the cases of cancer of the rectum were submitted to radical operation and in their report of 1913-1915, 71.8 per cent. were deemed suitable for radical operation.

The suitability of intestinal cancer for radical operation depends:

1. Upon the location of the neoplasm.
2. The extent of the growth and its metastasis.
3. Upon any associated local or systemic disease.

Obesity is here considered a disease because obese patients show a higher mortality.

Contraindications to Radical Operation. 1. Involvement of the lymph glands at a distance from the lesion. But all enlarged glands are not necessarily invaded by cancer because the infection, which invariably accompanies cancer, may be the cause of glandular enlargement.

Jameson and Dobson[9] have carefully worked out the lymphatic drainage of the colon and they arrange these glands into four groups.

1. The epicolic glands, which lie on the bowel wall and drain into the next two groups.
2. The paracolic glands, which lie in the mesentery along the vascular arches close to the gut.
3. The intermediate glands, which lie on the arterial branches between the vascular arches and the large vessels.
4. The main glands situated around the colic arteries close to their origin and drain from all of the foregoing chains.
5. Growths in the hepatic flexure and the right half of the transverse colon metastasize to glands about the pancreas and along the side of the aorta. The radical removal of cancer in this region is much more difficult and hazardous.

Colonic cancer usually develops slowly. It remains restricted to the intestinal wall for a long time. During the process of growth spread is by:

(a) direct extension.
(b) through the venous system.
(c) through the lymphatic system.

Hausman's[10] statistics of 112 autopsies on cases of cancer of colon found: in 21 the disease had spread beyond the bowel and become generalized; in 36 only the primary lymphatic glands were enlarged; and in 55 the disease was limited to the bowel. This emphasizes the low grade malignancy in some of these cancers, and the opportunity for surgical removal.

There is however a wide variation in the virulence of malignancy in colonic cancers according to the type of tumor. The colloid is the most malignant, the scirrhus next and the fungating type the least rapid in growth.

McGlaunan[11] in a series of 98 cases of cancer of the colon, found that 61 gave a history of an obstruction of some sort before operation.

Carson[12] in his analysis of 111 colonic cancers, found that 68, (62 per cent.) were in the iliac or pelvic colon, of which 50 per cent. were obstructed; 18 (16 per cent.) were in the cecum or ascending colon, of which 33 per cent. were obstructed; 9 (8 per cent.) were in the descending colon, of which 7 (7.7 per cent.) were obstructed; and 5 (5.4 per cent.) were in the splenic flexure, of which all were obstructed. This shows that neoplasms of the right colon are much less liable than any of the growths of the large bowel to become acutely obstructed.

X-ray Diagnosis. X-ray diagnosis is not dependable. Frequently the clinical diagnosis may be quite clear and the x-ray findings negative. At other times the roentgenograms will definitely show malignancy while the clinical symptoms are still vague.

Operative Mortality. The operative mortality is affected by

1. The virulence of the organism in the colonic contents.
2. The obstruction always present in some degree.
3. The thinness of the walls of the colon and its limited blood supply which makes healing less rapid.
4. Gaseous distention before firm agglutination of the surfaces occurs. This causes leakage to occur along the intestinal suture line and a fatal peritonitis results.

On the other hand, patients who survive operation for malignant disease of the colon, if not too extensive, have an excellent chance of remaining cured. The wide excision not only removes the growth but also the glands draining the affected bowel.

Preoperative Preparation. The operative mortality will be much reduced by careful preoperative preparation.

If no obstruction is present our patient receives one and a half ounces of castor oil three days prior to the operation and an enema each night from that time on.

Following the purgative the diet is liquid, such as water, tea, ginger ale, lemonade, orangeade, chocolate and sugar. No proteids are allowed. This changes the intestinal flora.

For twenty-four hours before the operation a teaspoonful of paregoric is given every 4 hours to diminish the intestinal juices and to produce constipation.

At operation the colon is found empty or containing only very small amounts of fecal material and there is a minimum of soiling of the operative wound.

If there is evidence of partial obstruction the purge is withheld on account of the danger of precipitating acute obstruction, and instead our patient is given an ounce of mineral oil three times daily and an enema night and morning for five days before the operation. During this time he is given the low carbohydrate diet allowed patients without obstruction and is also given the paregoric every 4 hours for twenty-four hours before the operation.

If acute obstruction is present the preoperative preparation must be omitted and immediate operation for the relief of the obstruction attempted.

Colostomy. One of the fundamental surgical principles involved in the treatment of infections of the colon is that when an infection cannot be relieved by medical treatment it can sometimes be cured by placing a stoma cephalad to the infection. There is a widespread misconception as to the inconveniences caused by a stoma. Very seldom do our patients use any other mechanical appliance than a piece of gauze to protect against accidents.

The sympathetic nerve supply to the bowel is somewhat segmental, and each portion of the gut has a potential sphincter control; so that when a segment becomes terminal by operative procedure, a functional change gradually occurs, and there is a slowing of the current as it approaches the end. This change permits the individual with a stoma to reassume control. In cancer, a stoma is of value only when used at the earliest possible moment after the tumor is discovered to be inoperable. It is not of value when the patient is moribund.

Frequently, after an artificial anus has been made, a tumor previously supposed to be inoperable, may be successfully removed on account of its diminution in size and the great improvement in the condition of the patient.

Types of Operation for Cancer. The type of operation selected in dealing with cancer of the colon depends upon the degree of obstruction existing and the amount of infection present. Radical operations should never be performed in cases with acute obstruction because such procedures have a very high mortality. In such cases the bowels are usually filled with liquid material teeming with virulent organisms, and it is almost impossible to perform a radical operation without considerable soiling. Infection and edema will be found in the bowel for a considerable distance beyond the growth; these tend to prevent satisfactory healing, and operation under such circumstances is usually followed by fatal peritonitis. The mortality following radical operation is enough higher in even partial obstruction cases than in nonobstructed cases to justify a preliminary operation whenever possible.

The handling of infected growths and trauma to the surrounding tissues in cases of acute obstruction also greatly increases the operative risk.

Occasionally cancers are met without obstruction and with only slight inflammatory reaction surrounding the growth. Nothing is to be gained by a two-stage operation in such cases, and therefore, a preliminary section with an enterostomy at the same time to prevent gaseous distention after the operation may be performed. When obstruction or marked infection is present short-circulating operation or a colostomy should be performed first to relieve the obstruction and the resection done two or three weeks later. After this time the inflammation surrounding the growth will often be found to have subsided considerably.

In cancer of the right colon in which there is no obstruction, a one-stage operation for resection of the diseased area with a lateral anastomosis between the lower ileum and the distal colon is the operation of choice. In such cases an enterostomy with a small catheter should be made

in the lower ileum. If obstruction is present, the best results are obtained by making an ileocolostomy between the lower ileum and the transverse colon first, and by resecting the diseased area two or three weeks later. At the time of the first operation the ileum should be cut across, distal to the anastomosis in order to divert the passage of feces through the diseased lumen and thus place this portion as nearly as possible at rest.

Primary resection for cancer of the transverse colon carries a high mortality; it may be more safely performed by making a temporary cecostomy at the same time. On account of the mobility of the transverse colon it is often possible to remove cancer in this portion of the bowel by a Mikulicz type of operation. The first and second stages of the operation may be performed at the same time. A cecostomy should however always be performed in order to prevent post operative gaseous distention. The Mikulicz type of operation is difficult to perform in the descending colon because of the fixation of this portion of the bowel. If no obstruction is present a primary resection with a temporary enterostomy may be performed. If there is an obstruction a colo-sigmoidostomy, followed later by a resection of the affected area, is probably the safest course. The sigmoid loop is usually quite mobile and a Mikulicz type of operation can ordinarily be satisfactorily performed for cancer in this region.

The neoplasms of the recto-sigmoid in which from 2.5 cm. to 3.5 cm. of the rectum above the peritoneal fold in Douglas pouch is free and unaffected, a primary resection may be performed if no obstruction is present, and an end to end anastomosis made over a tube, as suggested by Balfour. It is safer here also to do a preliminary colostomy, and later do a resection and still later close the stoma.

In unobstructed cancers of the rectum at a point below the peritoneal reflection over Douglas pouch it is best to make a preliminary colostomy and two weeks later remove the entire rectum, by a posterior resection.

Post Operative Management. The most urgent postoperative indication following operation on the colon is to prevent gaseous distention and peristalsis long enough to assure satisfactory union. Our patient's reaction to the operation modifies somewhat our course during the first few days, but it is usually well to withhold everything by mouth for the first four to six days, and during this time to sustain him with subcutaneous administration of 2000 c.c., to 2500 c.c. of physiologic sodium chloride solution per day.

During the first 48 hours morphine sulphate, 1/6 gr. doses, every four hours is given. After the second day, and some time before, codein sulphate, 1/6 gr. doses, is substituted because some patients become quite irrational under the continued use of morphin. The codein is continued until the end of the fourth day. This abstinence period depends largely on the postoperative reaction of our patient. If the temperature and pulse remain normal he is allowed to take water by mouth after the fourth day and the subcutaneous injections are discontinued. Water alone is given by mouth the first day and fruit juices are added for the next two days. If a sharp postoperative reaction occurs the pulse is the best index as to when fluids should be allowed by mouth; if the pulse rate drops and remains down water may be given by mouth.

Under this treatment patients remain remarkably free from pain and gaseous distention. Its only disadvantage is the accompanying thirst which is not relieved by fluids given sucutaneously, even in large amounts, but only by stimulation of the salivary glands. Without such stimulation patients are likely to develop parotitis. Relief of thirst is most satisfactorily obtained by biting sliced lemon and rinsing the mouth frequently with cleansing mouth washes and orange juice. The preventing of gaseous distention and peristalsis which is so satisfactorily accomplished by this type of treatment, is of the utmost importance in the immediate postoperative care.

DIAGNOSIS AND TREATMENT OF GONORRHEA IN THE FEMALE

A. M. Saunders, M. D., and
Isabelle Weaver, M. D.
CHICAGO

Diagnosis of gonorrhea and proper treatment in the female is often connected with great hazards. This fact may be considered an important cause for failure to reduce the incidence of the disease.

An acute gonorrhea is usually diagnosed without much difficulty, but the subacute and chronic

cases are very often overlooked. Diagnosis of gonorrhea by clinical methods is not possible in the prostitute or in masturbaters and the necessity for laboratory tests is indisputable.

There are three different methods in diagnosing gonorrheal infection in the laboratory. The oldest, simplest and most common method is that of microscopically examining a pus smear from the discharge with methylene blue and with a Gram stain. The determining factor for the success of this method is the technique employed in obtaining a specimen. A vaginal smear is of no value. The only proper way to obtain a smear is from the external os of the cervix after the plug of mucus has been removed, which is usually found in that region in various infections. A speculum must always be employed to obtain a specimen in the proper way. This examination, if negative in result, should be repeated six to eight times, at intervals of eight to ten days; all treatment should be stopped during that time. A urethral smear must be taken from every case. The technique for securing material is as follows: A sterilized, tightly wound wood applicator is used with which a complete twist in the urethra is made. From this swab a thin smear is made on a microscopic slide. There also should always be a slide made from the folds of the rectum since it is not at all infrequent to find gonorrhea lodging there.

The second method is by making cultures of the offending organism. The gonococcus is not easily cultivated; it is often overgrown by the more hardy bacteria. The preparation of media and cultivation of the organism requires knowledge and experience of an expert and is subject to uncertainty of results. This method is seldom used.

The third method is that by complement fixation in using a mixed gonorrheal antigen which can be purchased at various biological supply houses. A few laboratories have reported good results with this method but according to our findings and to results obtained from two different laboratories it has been our experience that the complement fixation test is only of relative value.

A female patient coming under the care of a physician, with a history of present or previous clinical symptoms of a gonorrheal infection should be subjected to prolonged observation. Repeated laboratory examinations in making the diagnosis and during treatment are necessary. In Illinois six consecutive negative pus smears from the cervix or urethra, taken at intervals of from five to ten days, are required to consider a patient as cured. At the Geneva School for delinquent girls twelve negative smears are obtained before the patient is released from treatment.

The following chart indicates the variety of laboratory findings in cases of subacute and chronic gonorrhea, which are of usual occurrence:

CHART 1. CONSOLIDATED LABORATORY FINDINGS

EXTENDING OVER A PERIOD OF AT LEAST SIX MONTHS

Name of patient	History	Complement Fixation		Smears		
		Neg.	Pos.	Neg.	Pos.	Dfl.
L. C.	Positive	1	2	1	5	1
A. B. C.	Positive	4	..	2	3	2
M. C.	Positive	3	1	11	..	..
E. D.	Positive	..	3	..	4	..
E. H.	Negative	4	..	12	1	4
B. A.	Negative	4	..	9	1	1
E. A.	Negative	4	..	1	1	..
C. B.	Negative	2	2	2	3	..
E. B.	Negative	4	..	5	..	..
R. B.	Negative	4	..	10	..	..
H. B.	Negative	4	..	4	2	..
L. C.	Negative	..	2	..	3	..
G. C.	Negative	2	2	12	..	2
S. C.	Negative	4	..	6	..	..
L. O.	Negative	4	..	6	4	..
F. D.	Negative	4	..	12	7	..
B. G.	Negative	4	..	7	1	..
T. G.	Negative	4	..	7	..	..
R. H.	Negative	3	1	5	..	..
G. J.	Negative	4	..	7	1	..
V. L.	Negative	4	..	9	9	..
J. L.	Negative	5	..	12	1	..
L. M.	Negative	3	1	8	4	..
E. N.	Negative	4	..	12	..	..
M. O.	Negative	2	2	10	..	..

Pos.—Positive.
Neg.—Negative.
Dfl.—Doubtful.

CHART 2

THESE PATIENTS WERE UNDER OBSERVATION AND TREATMENT FOR MANY MONTHS

Name of patient	History	Complement Fixation		Smears
		Date	Result	
D. B.	Positive	2/21	Neg.	Neg.
		3/14	Pos.	Neg.
		5/ 1	Neg.	Pos.
		8/ 7	Neg.	Neg.
		12/ 3	Neg.	Neg.
		2/ 4	Pos.	Pos.
		4/ 8	Neg.	Pos.
		5/ 7	Neg.	Pos.
		7/22	Neg.	Neg. (2 smears)
		12/17	Neg.	Neg. (2 smears)
		2/ 4	Neg.	Neg. (2 smears)
L. M. B.	Positive	2/24	Neg.	Pos.
		4/14	Neg.	Neg. (3 smears)
		6/19	Neg.	Neg. (3 smears)
		10/ 5	Neg.	Pos. (2 smears)
		12/10	Neg.	Neg. (6 smears)
L. D.	Positive	3/25	Neg.	Pos.
		7/22	Neg.	Dfl.
		12/17	Neg.	Pos. (2 smears)
		2/ 4	Neg.	Neg. (5 smears)
		6/15	Neg.	Neg. (2 smears)
H. D.	Positive	12/ 7	Neg.	Pos. (3 smears)
		1/ 5	Neg.	Neg.
		2/17	Neg.	Neg.
		3/21	Neg.	Neg.
		5/13	Neg.	Neg.
T. H.	Positive	10/16	Neg.	Pos. (2 smears)
		1/14	Neg.	Pos. (2 smears)
		4/30	Neg.	Neg. (7 smears)

Name of patient	History	Complement Fixation Date	Result	Smears
H. D.	Positive	6/11	Neg.	Pos. (2 smears)
		9/11	Neg.	Pos. (3 smears)
		10/16	Neg.	Pos. (2 smears)
		1/21	Neg.	Neg. (4 smears)
		3/17	Neg.	Neg. (4 smears)
M. D.	Positive	12/ 7	Pos.	Pos.
		3/28	Pos.	Pos.
		7/ 8	Neg.	Neg.
		8/17	Neg.	Neg.
		12/30	Neg.	Neg. (4 smears)
M. M.	Positive	4/ 7	Pos.	Pos. (4 smears)
M. Mc.	Positive	1/21	Pos.	Dfl.
		2/11	Pos.	Pos.
		4/22	Neg.	Neg. (3 smears)
		5/28	Neg.	Pos.

Chart two gives an illustration of the necessity for prolonged observation and treatment. It shows the usual laboratory findings in patients under treatment. A few negative smears and a negative complement fixation report are very common after a short course of treatment but a discharge often reappears within one to three months and the pus smears again become positive.

TREATMENT

Much has been written of the treatment of gonorrhea in the male, but there have been such unsatisfactory results in the treatment in the female that not a great deal is written about it. We know that gonorrhea is a self-limited disease, but often when one is least aware an old salpingitis will arise and in these cases nothing but surgery is indicated. Many women have been infected, had none of the acute symptoms and have been none the wiser of having harbored a Neisserian infection many years. There are so many women having vaginal discharge that oftimes little importance is attached to it by the individual. It is well known that the cervix is the most frequently attacked by gonorrhea in the married or parous woman, because of the peculiar glands and lymphatic arrangement in the cervix and if this infection is not carried up into the endometrium and tubes there is always a chance of cleaning up these cases. When a case comes to us where the Bartholin or other glands in the external genitals are involved, they are opened and drained if they are suppurating and nothing but sitz baths and pitcher douches allowed. These douches are given every three hours and sitz baths three times a day. After all evidence of external infection has passed these patients have frequent smears made of cervical, urethral and anal folds. If they return positive they receive long, slow douches, the water having very little force. We use about four gallons of water, 110 degree F. with potassium-permanganate to color the water a deep purple. After the douche we insert a speculum into the vagina and remove any mucus plugs which may be left hanging in the cervix and twist a tightly wound wood applicator medicated with 15 per cent silloid into the cervical canal and allow this applicator to remain in site while we finish the treatment. It is not generally known that often in the female there is a stricture in the urethra. It is well to pass a small olive bougie into the urethra in every case and if the stricture hugs the shoulder of the bougie you can be certain that there is some contraction there. A few drops of silloid 15 per cent instilled in the urethra can only bring good results. Then we take a fluff applicator, this is done by winding the wood applicator loose, saturate this well with silloid, and spread the folds in the anus and paint the entire space between the vagina and anus. Last after removing applicator from cervix, insert a suppository which has a cocoa butter base and one which carries antiseptics into the cervix. A piece of gauze is then taken about two inches wide and half a yard long, saturated with silloid and tucked up and around the cervix. The patient keeps this dressing for twenty-four hours; then the gauze is renewed.

This treatment has been found successful with us.

State-Psychopathic Institute and State School for Girls.

THE LETHARGY OF THE MEDICAL PROFESSION TOWARD MEDICAL LEGISLATION

HON. THOS. L. FEKETE, JR.
Representative in the 55th General Assembly
EAST ST. LOUIS

It is fair to presume, that because of their education, character and general intelligence, the members of the medical profession—speaking of those who practice that profession in all of its branches—ought to be the outstanding figures in their respective communities in society and politics. Their daily personal contact with the citizenry makes them a tremendous potentiality for good and an influence that is incalculable. The confidence inspired by the practitioner in

the citizen who submits that which is nearest and dearest to him, his own well-being or that of those of his loved ones, is in itself an evidence of the trust and faith that is placed in him. It is not a far step from the individual's physical well-being to that of his political and social condition. Psychologically, his social and political life is so affected by his physical condition that the line of demarcation is almost indistinct; that physical condition may be the very glass through which he views his political and social condition and whether or not his vision is pessimistic or optimistic depends much upon the medical practitioner.

It necessarily follows that when the citizen exercises his right of franchise, he will express it according to the lights which he has and the influence that has made its impression upon him. In exercising that right of franchise, he selects for us those who will enact the rules and guides of our conduct, those who will put into force and effect such rules and those who shall interpret those rules. Thus, is it illogical to presume that the medical practitioner has much to do with the making of our government? And, whether it is good or bad,—it is no better or worse than we deserve—the share of responsibility of it cannot be shifted by the medical profession.

With that profession as well as others, there has been a tendency in the past to resent regulation—that is characteristically American. "That people is best governed which is least governed" is an idea that is inbred in Americans. But the complexity of our lives and our daily conduct is so related to that of our fellowman that for the benefit of the many, the individual must sacrifice some of his personal liberty. He who is suffering is most susceptible to promises of relief and most easily victimized. For the protection of the public from the practices of charlatans and mountebanks, it has become necessary for the State to say who shall practice the profession of treating human ailments. Every school of treatment has been most interested in its particular scheme of ministrations; some are more interested in the pecuniary results than the well-being of its patients and the learning and ability of its students. The State is not particularly interested in the form of treatment; that is a matter of concern to the individual; but the State is interested in putting its stamp of approval upon the ability of the applicant for a license to diagnose ailments according to the most modern methods of diagnosis. It evidences its interest by legislation.

Now what is the medical profession doing toward beneficial medical legislation? What has it done in the past? Outside of the interest in its particular school has it shown any interest in the general welfare of the public? As good citizens, the profession is obligated to take a larger interest than the selfish one for the protection of its own school. It is interested in seeing that the right men are elected to make legislation and that they are educated as to the needs of the people in this respect. Have you done that in the past? Now, candidly, has not the profession made its first move after the legislators have been elected and are considering some legislation that might give it competition? Has the interest of the public been paramount in your minds on such occasions? You have a legislative committee and, to its credit, it has functioned. But have you as individuals done your full duty? Have you interested yourselves in the election of the proper men to public office—men who have the vision, the capability and the desire to act for the public good and, after having elected them, have you given freely of your counsel and advice?

The patriotism of the medical profession is beyond question. The exemplification of that patriotism is more than vivid in our recollections of the late war; as a profession, you gave freely and more, perhaps, than any other. Your achievements on that occasion stand out more prominently than that of any other profession. Nor in time of peace have you been found wanting when epidemics of disease have threatened our people. To you alone is the credit due that we live in the most sanitary country in the world and through your unselfish service in foreign lands and for foreign people is this government recognized for its magnanimity. You are justly entitled to the unstinted gratitude of the nation.

In closing I would have you ask yourselves have you interested yourself in the election of your public officers and have you counseled them after you have elected them? If you have not, then you have been derelict in your duty. By reason of your education, your intelligence and your intimate contact with the people, it is an obligation.

EXTERNAL EYE DISEASES OF INTEREST TO THE GENERAL PRACTITIONER*

E. R. CROSSLEY, B. S., M. D.
Surgeon, Eye Dept., Illinois Eye and Ear Infirmary
CHICAGO

It is my purpose, owing to our limited time, to take up a certain group of the commoner external diseases of the eye, and to try to show the importance of their immediate recognition when such cases present themselves.

There is no other class of disease in which the correct diagnosis should be more promptly made and proper remedial measures taken than in certain of these eye diseases.

To the medical man with no special training or experience the inflamed red eye (commonly known as pink eye) differs little in appearance. Some of the simplest diseases are easily confounded with the most serious, and my aim is to make clear the differential points in these cases, and in order that the practitioner may recognize and know with what he is dealing, and without delay furnish the proper care and treatment.

To do this with greatest clearness it is well to briefly review the circulation of the anterior portion of the eyeball.

The long posterior and anterior ciliary arteries anastomose just after the latter pierces the sclera not far back of its junction with the cornea, and these arteries supply the ciliary zone and iris.

Fine branches are given off the anterior ciliary arteries as they pass through the sclerotic. From the episcleral branches are given off the looped capillaries to the margin of the cornea. Others are given off to the anterior and post conjunctival.

The looped capillaries to the margin of the cornea are the fine vessels shown in circumcorneal or ciliary injection. The character of the injection in any given case is of some value in locating the seat of congestion.

There are two types of injection in inflammation of the eye to be differentiated.

1. *Conjunctival injection* (superficial).
2. *Ciliary* (or deep circumcorneal) injection.

In severe inflammatory disease of the anterior part of the eye, the above two types of congestion are often found associated, as would be expected because of the free anastomosing of the two systems of blood vessels.

This type is known as *ciliary* and *episcleral injection,* and is seen in scleritis and glaucoma.

DIFFERENTIAL TABLE

Conjunctival Injection (Superficial)	*Ciliary Injection* (Deep)
1. Derived from posterior conjunctival vessels.	1. Derived from anteriar ciliary vessels.
2. Accompanies superficial diseases of conjunctiva.	2. Accompanies diseases of cornea, iris and ciliary body. (Deeper structures.)
3. More or less muco-purulent or purulent discharge.	3. Often lacrimation but no conjunctival discharge.
4. Most marked in fornix conjunctiva.	4. Most marked immediately around cornea, hence circumcorneal.
5. Fades as it approaches cornea.	5. Fades toward fornix.
6. Bright brick-red color.	6. Pink or lilac color.
7. Composed of a network of coarse, tortuous vessels, anastomose freely, and placed superficially so the meshes are easily recognized.	7. Composed of small straight vessels, placed deeply, so the individual vessels cannot be recognized easily, but are seen indistinctly as fine straight lines radiating from cornea.
8. Can be moved with the conjunctiva by pressing on lower lid.	8. Cannot be displaced by movement of the conjunctiva.

The ability to recognize these forms of injection is the clue to the diagnosis in the various inflammatory diseases, and lack of this ability often leads to some of the gravest errors in diagnosis. The earlier stages of some of the most destructive diseases, iritis, glaucoma, are often mistaken for the simplest and least harmful, acute catarrhal conjunctivitis.

These three most commonly mistaken inflammatory conditions can be best studied by a table of differential points:

COMPLICATIONS AND SEQUELAE

1. Acute catarrhal conjunctivitis is a superficial or surface infection accompanied by *conjunctival injection* of a greater or less degree, usually lasts a few days or a week or two and clears up. It is not uncommon, however, for it to be complicated with corneal ulcer which may develop, depending upon the kind of infection present.

2. Acute iritis is a deep seated infection, accompanied by *ciliary* (*deep*) or *circumcorneal injection.* The ciliary body is so commonly involved along with the iris (irido-cyclitis) that some authors consider pure simple iritis rare.

Sequelae.

It is common to see posterior synechia and pigment deposits on the anterior lens capsule.

Exclusion and *occlusion* of the pupil, atrophy of the iris, opacities of the vitreous, deposits upon the post capsule of lens, and cataract, are

*Read before the Joint Meeting of the Chicago Medical Society and the Chicago Ophthalmological Society, Feb. 23, 1927.

ACUTE IRITIS	ACUTE CONJUNCTIVITIS	ACUTE GLAUCOMA
1. Iris swollen, dull and discolored.	1. No change in iris.	1. Iris congested, discolored, dull periphery pushed forward.
2. Pupil small, gray, sluggish, irregular after use of atropin.	2. Pupil normal.	2. Pupil dilated, oval, immobile.
3. Anterior chamber of normal depth (deeper in serious form) and presents exudation.	3. Anterior chamber normal.	3. Anterior chamber shallow and aqueous sometimes turbid.
4. Cornea transparent. May present spots on posterior surface and *sensitive*.	4. Cornea transparent. Sensitive.	4. Cornea steamy and *insensitive*.
5. Ciliary (circumcorneal) injection; pink zone of fine vessels surrounding cornea and fading toward fornix.	5. Coarse meshes most pronounced in fornix and fading toward the cornea.	5. Ciliary and episcleral injection (also conjunctival congestion).
6. Conjunctiva usually transparent.	6. Conjunctiva reddened and opaque.	6. Conjunctiva congested and chemotic.
7. Lacrimation but no discharge.	7. Mucous or muco-purulent discharge.	7. Lacrimation but no discharge.
8. Tension usually normal, occasionally increased.	8. Tension normal.	8. Tension increased.
9. Some ciliary tenderness.	9. No ciliary tenderness.	9. Ciliary tenderness.
10. Pain radiating to forehead and temples, worse at night.	10. Discomfort and gritty feeling, but no real pain.	10. Severe pain in and about eyes, with headache.
11. Diminution of vision.	11. No interference with vision, except blurring caused by discharge smeared over surface of cornea.	11. Marked dimness of vision.

some of the complications. In exclusion there is an annular posterior synechia, causing a loss of communication between the anterior and posterior chamber.

Aqueous secreted by the ciliary body is hemmed in; the iris is stretched and atrophied. (Iris Bombe.) This causes a pressure against the angle of the anterior chamber (Iris Angle). Adhesive inflammation may occur, resulting in glaucoma and blindness if not quickly relieved.

Occlusion is a total posterior synechia of the iris to the anterior surface of the lens capsule, plus a filling in of the pupillary space with exudate, resulting in a complete loss of sight.

3. *Glaucoma* occurs in two varieties: 1. *Primary,* when no other ocular disease has preceded; 2. *Secondary,* when it follows some other disease or injury of the eye. Primary glaucoma occurs in two forms: 1. Inflammatory or congestive; 2. Non-inflammatory or non-congestive, usually called *simple.* The *inflammatory* variety is divided into acute and chronic, according to the rapidity of increase of intraocular tension.

These forms are usually preceded by prodromal symptoms, such as a diminution in the acuity of vision, fogginess, slight cloudiness of center of cornea, shallowness of anterior chamber, circumcorneal injection, dilatation of pupil with sluggish reaction, a little tension and slight pain in the eye and head. These symptoms may last for a few hours and disappear, the eye becoming normal except for the lack of accommodative power.

Frequently the thought is that merely a change of glasses is required, and this being done, no further attention is given the eyes. The inevitable violent attack of the *active stage* of glaucoma follows sooner or later. This could have been foretold and averted in competent hands, had fields of vision and tension been taken at the onset of the symptoms. In *simple chronic non-inflammatory glaucoma, the* onset is insidious, without marked external symptoms or pain. In this type the diagnosis is made by the increase of tension and the fundus picture, with the ophthalmoscope.

It is not an uncommon mistake to diagnose an acute inflammatory glaucoma as iritis or conjunctivitis, and even use atropin in such cases. This has come to my observation many times. The dilated pupil, increased tension and great pain should be sufficient to differentiate the conditions. A diagnosis of cataract from the greenish pupillary reflex has often been made, and valuable time lost for active treatment, waiting for maturity of the cataract.

I have even seen the constitutional symptoms from an acute attack, headache, nausea, vomiting, etc., mistaken for an attack of appendicitis.

Chronic simple glaucoma may be mistaken for simple optic atrophy.

1. In the latter there is no increase of tension.
2. Shallow instead of deep excavation of disc.
3. Central vision reduced and loss of peripheral color fields.

Every complaint of the eyes is a case for the oculist for the immediate correct diagnosis; the simplest appearing case may result most seriously. *Delays* and *mistakes* in diagnosis in this class of case alone are responsible for the loss of sight of thousands. In fact, I am convinced that the loss from this source far exceeds that of ophthalmia neonatorum.

There should be more activity on the part of organizations for conservation of sight and greater distribution of propaganda on the subject of "pink eye" as well as ophthalmia neonatorum, not only among the laity but among the *medical profession* who see these cases first, to impress upon them the importance of *accurate diagnosis* in all cases of red, inflamed (pink) eyes, and the seriousness of incorrect or delayed treatment.

FOREIGN BODIES IN THE URINARY BLADDER

EDWARD W. WHITE, M. D., F. A. C. S.,
ALF J. HOLM, M. D.
CHICAGO

Cases of foreign bodies in the urinary bladder are always of interest because they occur with such frequency that every practitioner may expect to meet with them. Although the literature of the subject is very extensive it consists mostly of isolated case reports; and it is rather surprising to find how few are the general reviews of the subject. In 1856 Denúce[1] collected 391 cases. Packard,[2] in 1897, collected 221 cases of foreign bodies introduced into the male bladder by the urethra. Max Hirsch[3] in 1903 collected 111 other cases, including 8 of his own, observed in about ten years. Manton[4] in 1919 stated that there were 455 titles and papers on foreign bodies in the bladder (exclusive of simple calculi) published between 1880 and 1916. The Index Medicus gives a yearly average of about nine or ten cases during recent years, and in the Third Series of the U. S. Surgeon-General's Catalogue, covering the period 1897-1920, I find that there are 187 articles cited which deal with foreign bodies in the urinary bladder. I have personally met, in the last fifteen years, a rather large series of foreign bodies in the bladder and a short synopsis of a few of these cases is given at the end of this report.

METHODS OF ACCESS OF FOREIGN BODIES INTO THE BLADDER

Foreign bodies (excluding ordinary simple calculi) may gain access to the bladder in several ways: First, by a traumatic penetration of the bladder wall, such as by a projectile from outside the body; secondly, by spontaneous perforation of the bladder wall by a foreign body, including suture material, migrating from some neighboring organ; and the third method, which is by far the most common, introduction by the urethra. A fourth class might be added, i. e. foreign bodies such as instruments or sponges left in the bladder after a vesical operation.

Foreign bodies reaching the bladder by a traumatic wound are mostly bullets. These at times are accompanied by pieces of the patient's clothing; or a piece of clothing may be pushed into the bladder by a sharp object penetrating it. Thouvenin[5] reports a case in which a man was impaled on the leg of a chair and a piece of his trousers was pushed into his bladder. In 82 cases of foreign bodies of the bladder of traumatic origin collected by Bartels,[6] there were 10 pieces of clothing, 22 with particles of bone and 40 projectiles of different calibers.

A large number of cases are recorded in which various types of foreign bodies have migrated into the bladder by an ulcerative process from some organ in the vicinity. These include objects which have been swallowed by the patient; also instruments, dressings, etc., left in the abdomen or elsewhere after a surgical operation, as well as the skeletal remnants of an extrauterine pregnancy.

If the intestine is adhered to the bladder, either by an inflammatory or neoplastic process, communication by an intestino-vesical fistula will be established between the two cavities and a foreign body can pass into the bladder. Similarly paravesical cysts and abscesses may discharge into the bladder after ulceration of its wall. According to Legueu and Michon,[7] Rayor[8] and Broca[9] reported cases of dermoid cyst contents being found in the bladder originating in this manner.

Ossifluent abscesses which have formed in the vicinity of the bladder, especially those containing the remnants of feti from extrauterine pregnancies, may rupture into the bladder. Goullioud,[10] Ungerer,[11] Desnos,[12] Heresco,[13] and others have reported cases of foreign bodies in the bladder from ossifluent abscesses, and skeletal fetal remains were reported by Monaschkin[14] and Guisy.[15]

Monaschkin, reporting in 1926, found 40 cases in the literature of the previous thirty years in which a foreign body had entered the bladder by penetration of its wall. These included 6

cases of penetration from the intestine and 15 cases in which the foreign body was a sponge, or suture material used in an abdominal operation. Luys[16] mentions the case of a man operated on for inguinal hernia whose bladder had accidentally been opened and sutured during the operation. Some months later the silk suture threads, which had fallen into the bladder, were found to be the nucleus of a phosphatic calculus. Luys reports a similar case in a women following an abdominal hysterectomy and Le Fur[17] had an identical case.

Bladder calculi having as their nucleus a piece of suture material seem to be more usual after gynecological than after other operations. Landau,[18] Nitze,[19], V. Dittel,[20] Mankiewicz,[21] in addition to those already cited, have reported such cases. To explain the presence of this suture material in the bladder there are two hypotheses: either the bladder wall becomes incarcerated in suturing and the thread falls into the bladder, or else the presence of the thread forms an abscess at the site which secondarily opens into the bladder. The first hypothesis seems the more likely.

Regarding swallowed objects which have later been found in the bladder: Freeman[22] extracted a phosphatic calculus from the bladder of a boy the nucleus of which was a darning needle swallowed 18 months previously. Harrison[23] removed from the bladder of a man a tobacco pipe mouthpiece which he had swallowed a long time before. In Jacomet's[24] case a boy swallowed a small paint brush which in time perforated the bladder wall, set up a recto-vesical fistula, and was spontaneously eliminated per rectum. Monaschkin[14] includes five swallowed objects in his list.

Foreign Bodies Introduced by Urethra. Foreign bodies introduced into the bladder by the urethra may be of two kinds: they may be instruments introduced by a physician or by the patient himself for the purpose of relieving a urethral stricture, incontinence of urine or some other pathological condition; or, as is very often the case, they are objects introduced to excite sexual gratification, to cause abortion in the female, or in the male to check the issue of semen and prevent impregnation.

Of the surgical instruments, catheters and bougies in whole or part are the most frequent; and nearly 50 per cent. of the cases collected both by Hirsh and Packard were of this kind. A fragile catheter or sound will often break and part of it slip into the bladder. Thermometers have also been found in the bladder as reported by Vincent[25] and Driout.[26]

Slotkins'[27] patient, a man of 61 years, introduced a thick twisted strand of hair for the purpose of relieving incontinence of urine; and there are reports of several foreign bodies introduced for a similar purpose, and especially in those suffering from gonorrheal stricture. Thus Sheffield's[28] patient had introduced a hat-pin 7½ inches long.

The foreign bodies introduced into the urethra for masturbation and similar purposes, and which accidentally slip into the bladder, include a wide variety of objects; they are usually elongated bodies. In 34 of Packard's collected 221 cases the patient acknowledged this origin. In women the hairpin is a very common finding; Manton states that it is mentioned 93 times in 455 reports of foreign bodies.

In the female the urethra being very short and the sphincter lax it is an easy matter for a foreign body in the urethra to enter the bladder. Writing pencils, penholders, pieces of wire, glass tubes, pieces of rubber tubing, elongated pieces of wax and paraffin, stems of plants and a variety of more bulky objects have been introduced into the male and female urethra, some of which will presently be referred to. In the male the mechanism by which such introduced bodies reach the bladder is complex but still feasible. Although it is stated that muscular action about the urethra is exerted toward propelling a foreign substance externally rather than toward the bladder, yet some, such as Agnew,[29] have asserted that the bladder itself has a sucking action which tends to draw bodies in the urethra toward it. Usually the soft end of a foreign body is first introduced and the hard end last; the foreign body is then supported against the urethral wall by the hard end and detumescence of the penis in the male will also cause the foreign body to progress towards depth. Once a foreign body has cleared the posterior urethra in the male contraction of the membranous part will push it easily into the bladder.

Among the peculiar bodies found in the bladder are an ear-ring and a 12 cm. plaited strand of hair reported by Voillemier;[30] a pig's penis 30 cm. long reported by Bazy,[31] bone crochet needles,

a cylinder of potato, a galvanized watch chain, and many other unusual bodies are included in Packard's collection. In Brigg's[32] case a nail 5 inches long was found. Candles have been used frequently, White and Duff[33] among those reporting a case of this kind. Among women slippery elm bark, employed to produce abortion, has slipped into the bladder. Pomeroy[34] recently reported a case of this kind.

Not all cases, however, have been consequential to action of the patient himself. De Tarnowsky[35] reports a peculiar case in which a man had a quantity of tar forced into his urethra by his companions as a joke. A lump of tar, covered with calcareous deposits, was removed from his bladder. Fleury[36] also reports a case in which a cordwainer's awl was pushed into a man's urethra and was removed from the bladder 15 years later.

Mention should be made that in some persons of weak mentality there is a morbid disposition to continuously introduce foreign bodies into the urethra. Hoggs[37] mentions the case of a hysterical woman aged 42, the mother of eight children, who in the course of a year had introduced 10 different objects, including three safety pins, into her bladder. Young girls frequently introduce beans, marbles and other objects into the urethral canal and Noguiera[38] mentions a number of such cases.

The Position Assumed by Foreign Bodies in the Bladder. The position assumed by a foreign body in the bladder is important from the point of view of extraction. The position depends to some extent on the age of the patient as the bladder differs in the child and adult. In childbirth the bladder is more an abdominal than a pelvic organ, and the vertical diameter is greater than the transverse. In the adult the bladder sinks into the pelvis and flattens so that the transverse is the greater diameter.

Short foreign bodies do not attach themselves to the bladder unless pointed; they follow the laws of gravity, that is, if they are heavy they sink to the fundus of the bladder, generally posterior to the urinary orifice and in the male behind in a post prostatic pouch, but if light they float on the surface of the urine; soft bodies, such as rubber tubes, may coil up in the bladder and their flexibility allows them to become adapted to the dimensions of the bladder; if not soft but still flexible they may bend in an arc, the ends resting against the sides of the bladder wall. The position assumed by long rigid bodies will depend upon their length and also whether or not they have sharply pointed extremities. Pencils, penholders, glass tubes and the like generally accommodate themselves to the larger diameter of the bladder, vertical in a child, transverse in an adult; or they may assume an oblique position. Hairpins generally become fixed in the bladder in the course of their introduction, that is the elbow of the pin is upward and the pointed extremities become fixed in the lower part of the bladder in the vicinity of the neck and the pin may move around the fixed point as a fulcrum during the filling and emptying of the bladder. It is well to remember this as in urethral extraction maneuvres may be necessary to correct the position in order to draw the hairpin out, elbow first.

Toleration of Foreign Bodies by the Bladder. Upon the introduction of a foreign body into the bladder there is generally at first some reaction; but if the body accommodates itself without great difficulty in the bladder, the latter soon ceases to react to its presence and the foreign body may remain for a long time without giving symptoms. Steinitz[39] reports a piece of rubber catheter in a man's bladder for 17 years and cites other cases of long duration. Packard mentions in his collection several cases in which foreign bodies have been tolerated for several years in the bladder without serious symptoms.

Spontaneous Expulsion. Spontaneous expulsion may occur either directly through the urethra or else by an ulcerative process in the bladder wall and fistula to the skin. Of the 391 cases of foreign body in the male bladder collected by Denuce in 1856 only 32 were expelled spontaneously; and in Packard's 222 male cases only 14. In Hirsch's 111 cases there were 4 spontaneous expulsions through the urethra. Bartels gives a higher percentage, 28 of his 87 traumatic cases showing spontaneous expulsion through the urethra.

When the elimination is not by the natural route it may occur by a vesico-vaginal or by vesico-anal fistula, or by a perivesical abscess. Grosglik[40] observed a needle eliminated by the anus and Villette[41] mentions the case of a canula expelled by a vesico-vaginal fistula after having remained 10 years in the bladder.

Elimination by the urethra is more usual in

females than in males for obvious reasons and incrustation is not even an obstacle to such elimination (cited by Le Dentu)[43] reports the case of a child who passed a calculus the size of a large olive which had developed in the bladder around the head of a pin.

Evolution and Complications. The bladder wall may, of course, be penetrated at the time of introduction of a foreign body, but this usually occurs much later. Other complications may occur such as the horrible case reported by Reed[44] in which a young man had passed a species of grass called foxtail into his urethra and bladder with subsequent infection of the pelvis. The scrotum and part of the pelvis sloughed away; a large part of the symphysis region also sloughed and a portion of the urethra had to be removed. There was an immense destruction of pelvic tissue but the young man finally recovered, having paid dearly for his folly.

Tolerated foreign bodies in the bladder do not usually give any characteristic symptoms. If in course of time infection and inflammation should occur the patient only shows the signs of cystitis. The infection may be early and arise from the foreign body itself or it may be the result of constant irritation where the body is in contact with the mucosa; in long-standing cases infection is almost sure to be present.

The commonest and most important complication of a foreign body in the bladder is incrustation with the gradual formation of an ammoniaco-phosphatic calculus about the body; in course of time in the case of small foreign bodies the general appearance is that of a true visical calculus. In elongated bodies incrustation usually begins at the central part and diminishes towards the ends. The process is more rapid in the case of immobile bodies of irregular surface and it may be observed in bodies which are extracted from the bladder within a few weeks after their introduction. In a case reported by Thevenard[45] a calculus had formed about the lower part of an elongated foreign metallic body, which had been introduced through the urethra six months before. The calculus had completely blocked the urethral orifice from the bladder.

McMartin,[46] in reporting some personal cases, expresses the opinion that neither the presence of infection in the bladder, residual urine, nor mechanical fixation in themselves are sufficient to account for the formation of stone on foreign bodies. He thinks that disturbances of colloid equilibrium with consequent precipitation of solids by large foreign bodies introduced into the bladder may account for the fact that they so rapidly become the nuclei of calculi.

Diagnosis. In traumatic cases diagnosis, especially of metallic bodies such as bullets, presents no difficulty; but in other cases, in the absence of a confession by the patient the presence of a foreign body may not be suspected; the case may be considered as one of cystitis and the foreign body may only be accidentally discovered by cystoscopy or sometimes by radioscopy. Vaginal or prostatic palpation may give valuable information but cystoscopy is always the surest means of arriving at a complete diagnosis; it not only settles the question of the presence of a foreign body but it gives information regarding its configuration, nature, location, mobility, and incrustation. An exploring sound can of course be used but its findings are limited. In children and occasionally in adults cystoscopy may not be possible, but in such cases radiograms may establish the diagnosis. Leueu[47] remarks that errors in localizing a foreign body in the bladder by radiology are easy; two radiographs in different positions of the patient are necessary especially in the case of a mobile body. Revel[48] reports a case in a woman, with a piece of a metallic sound in the bladder, in which cystoscopy failed but the body was easily located and extracted under radioscopic control.

In differentiating a foreign body covered with a calcareous deposit from an ordinary bladder calculus, fixity and immobility of the calculus, its elevated position above the fundus, and sometimes a concomitant peri-cystitis are points which are characteristic of foreign body calculus.

TREATMENT

Waxy or paraffin substances can be removed if small by aspiration, as reported by Alglave,[49] or by solvent such as naphtha or alcohol. In 1907 Lohnstein[50] introduced the use of benzine for this purpose and Weiss[51] reported the removal of wax candles from the male bladder by this method. To avoid benzine poisoning sterilized water is first introduced on which the foreign body floats and the benzine is then injected.

The lithotrite was formerly more extensively used than at present for the removal of small re-

cently introduced foreign bodies from the bladder, especially from the female bladder. For the removal of hairpins Leugeu,[52] instead of introducing an independent crochet employed the method of introducing the crochet inside an operating cystoscope, the hook catching the elbow of the pin after this had been placed in a favorable position by maneuvering. A forceps can be used in the same way for long non-friable bodies, and if they are encrusted the calcareous matter can first be crushed. In the female bladder small encrusted bodies may be extracted by the natural route. Legueu[53] has been able to extract bullets from the male bladder through the urethra, when there were no incrustations.

For small foreign body colculi Day[54] has successfully used a large Buerger or Braasch cystoscope with catheter guide through which an alligator forceps or snare was introduced.

Longitudinal or transverse suprapubic incision and cystostomy is the only practical method in young children with important foreign bodies in the bladder, and in adults having foreign bodies with sharp ends imbedded in the bladder mucosa 50 per cent. of Hirsch's 111 cases were operatively treated. Indeed with the present day perfection of the technique of cystostomy it is a question if this is not always the method of choice whenever extraction through the urethra is not quite easy. The Zuckerkandl method of perineal opening of the bladder may be adopted with advantage in the case of old persons in whom the suprapubic operation might be dangerous. The longer hospitalization in the case of section appears to be the only real objection as against urethral extraction. Lespinasse[55] says that cutting operations entail a convalescence of at least two weeks, and in conditions of this sort any opening made in the bladder tends to stay open as long as there is obstruction in the natural passages.

Naturally the method of choice will depend entirely upon the character, shape, size and position of the foreign object. Practically all small stones are easily removed by the Young ronguer either in segments or in toto and also a great variety of foreign objects introduced per urethra are likewise removed. I am of the opinion that whenever possible, every effort should be made to do an instrumental removal in all cases of small foreign bodies, this is generally an office procedure and does not entail hospital and operating room expenses. Practically all small objects are easily placed in position accessible for a rongeur alligator forceps through an endoscope or a plain direct Kelly cystoscope.

CASE REPORTS

Resume of some interesting cases taken from a series of 18. A. G., aged 35 years, widower, occupation rodeo performer, entered the Urological Service at the Alexian Brothers Hospital in November, 1926, with a history of an assault and a successful attempt to introduce some molten substance into the urinary bladder by his assailants. The patient on entrance was in severe shock, frequent hematuria, dysuria, strangury, and symptoms of a threatening peritonitis. The patient refused all operative assistance until 48 hours after his arrival, at which time a cystotomy was performed and 3 large globular masses of paraffin were removed; also an external urethrotomy later to relieve an extensive fibrosis and stricture of the posterior urethra. The convalescence was uneventful.

Case 2. A. L., Male, aged 52 years; married; occupation printer. Entered Alexian Brothers Hospital, May 9, 1920, with an acute retention of urine. All attempts at catheterization failed due to a hard fibrous stricture in the membraneous urethra. Patient had been operated on 7 years before, a cystotomy had been performed by his local physician for a vesical calculus. An external urethrotomy was performed by us and on exploring the cavity of the bladder and vesical neck we encountered 5½ inches of a stone encrustated rubber catheter which evidently was overlooked in his former operation 7 years before.

Case 3. L. N., Male, aged 62 years, widower. The patient entered the Illinois Masonic Hospital, November 22, 1921, with a history of frequent and difficult urination extending over a period of several years. Patient had had a previous bladder operation 8 years before the nature of which was difficult to ascertain. A cystoscopic examination revealed a retention of 14 ounces of foul smelling urine markedly trabeculated bladder and an extensive medium and left lateral lobe obstructions. No evidence of malignancy. A two stage prostatectomy was advised and 7 days later on exploring the bladder we encountered an incrusted index finger of a rubber operating glove snugly injected in a post-prostatic pouch. The patient wore a suprapubic drainage tube for 8 weeks at which time the prostate was removed with satisfactory end results.

7 West Madison.

REFERENCES

1. Denucé: Memoire sur les corps étrangers introduits dans las vessie. Jour. de Méd. Bordeaux. 1856, 2. s. 1. 525, etc.
2. Packard, F. R.: An Analysis of 221 cases of Foreign Body introduced into the Male Bladder per Urethra. Ann. Surg., 1897, xxv, 568.
3. Hirsch, Max: Beitr. z. Lehre von den Frendkörper des mannliche Harnblase. Deut. Zeitsch. f. Chir., 1903, lxx, 45.
4. Mantou, W. P.: Trans. Amer. Gynec. Soc., 1919, xliv, 145.
5. Thouvénin: Bull. Soc. de Chir., 1872, 3. s. l., 512.
6. Bartels, M.: Die Traumen d. Harnblase. Arch. f. Klin. Chir., 1878, xxii, 519.
7. Legueu, F. and Michon, E.: Corps étrangers de la Vessie. in Nouv. Traité de Chir. (Le Deutu. et Delbet) T. xxx, Paris, 1912.

8. Rayer, C. R.: Soc. de Biol., 1850, cited by Legueu and Michon.
9. Broca: Bull. Soc. de Chir. Par., 1868, cited by Legueu and Michon.
10. Goullioud: Thèse, Lyon, 1883, cited by Legueu and Michon.
11. Ungerer: Thèse, Strassbourg, 1881, cited by Legueu and Michon.
12. Desnos: Ann. d. mal. des. org. gén. urin. Par., 1892, 237. Cited by Legueu and Michon.
13. Heresco: Ann. d. mal. des org. gén.-urin. 1898, 802. Cited by Legueu and Michon.
14. Monaschkin, G.: Ueber Durchwanderung v. Fremdkörper aus der Bauchhöhle in die Blase. Zeitschr. f. Urol. Chir., 1926, xix, 87.
15. Guisy: Jour. D'urol., Paris, 1922, xiv, 324.
16. Luys, G.: Paris-Chir., 1920, xii, 347.
17. Le Fur: Paris Chirurg., 1910, ii, 618.
18. Landau: Cited by Legueu and Michon.
19. Nitze: Cited by Legueu and Michon.
20. v. Dittel: Cited by Legueu and Michon.
21. Mankiewicz: Cited by Legueu and Michon.
22. Freeman, H. W.: Lancet, Lond., 1885, i, 340.
23. Harrison, R.: Lancet, Lond., 1887, ii, 855.
24. Jacomet: Bull. Soc. de Chir., Par., 1904, xxx, 696.
25. Vicent: Cited by Legueu and Michon in "Nouveau Traite de Chirurgie," Par., T. xxx, 1912, p. 81.
26. Driout: Ann. d. mal. des org. gén. urin., 1908, i, 679.
27. Slotkin, G. E.: An unusual foreign body in the bladder. Urol. and Cut. Rev., 1922, xxvi, 141.
28. Sheffield, H. B.: Hat Pin in Male Bladder. Phila. Med. Jour., 1899, iii, 1016.
29. Agnew: "Principles and Practice of Surgery," 1891, V, ii, p. 457.
30. Voillemier: Cited by Legueu and Michon, p. 81.
31. Bazy: Ann. d. mal. des org. gén. urin. Par., 1891, ix, 1.
32. Briggs, W. T.: Foreign Bodies in the Bladder. Jour. Urol., 1926, xv, 383.
33. White, H. O., and Duff, R. R.: An Unique Foreign Body in the Male Bladder. Illinois Med. Jour., 1909, xvi, 543.
34. Pomeroy, F. B.: Jour. Urol., 1926, xvi, 377.
35. De Tarnowsky, G.: Jour. Amer. Med. Assn., 1915, lxiv, 1495.
36. Fleury: Bull. Soc. de Chir., Par., 1878, iv, 39.
37. Hogge: Assoc. frac. d'Urol., Par., 1912, xvi, 682.
38. Noguiera, A.: Amer. Jour. Urol., 1915, xi, 219.
39. Steinitz: Breslau Aertzl. Ztschr., 1879, i, 24.
40. Grosglik, S.: Centralbl. f. Chir., 1893, xx, 372.
41. Claudius: Cited by Le Demtu.
42. Villette, J.: Rev. gén. de clin. et de thérap., 1919, xxxiii, 88.
43. Le Dentu: Bull. Soc. de Chir., Par., 1885, xi, 340.
44. Reed, R. H.: Foreign Bodies in the Bladder. Med. Sentinel, 1899, vii, 389.
45. Thévenard: Paris Chirurg., 1923, xv, 210.
46. McMartin, C.: Vesical Calculi on Foreign Bodies. Jour. Urol., 1925, xiii, 219.
47. Legueu, F.: Trav. d. Clinique de Necker, 1917.
48. Revel, J.: Rev. gén. de clin. et de thérap., 1923, xxxvii, 484.
49. Alglave, P.: Ann. d. mal. des. org. gén.-urin., 1900, xviii, 579.
50. Lohnstein, H.: Berl. Klin. Wchnschr., 1907, xliv, 721.
51. Weiss, F.: Wien. Klin. Rundsch., 1909, xxiii, 421.
52. Legueu, F.: Simplification à l'extraction cystoscopique des épingles à cheveux de la vessie. Jour. d'Urol., Par., 1917-18, vii, 151.
53. Legueu, F.: Jour. d'Urol., Par., 1921, xi, 159.
54. Day, R. V.: Jour. of Urol., 1922, vii, 243.
55. Lespinasse, V. D.: Jour. Amer. Med. Assn., 1906, xlvii, 1189.

METHOD AND RESULTS OF TREATMENT WITH TRYPARSAMIDE AND MERCURY IN ONE HUNDRED CASES OF NEURO-SYPHILIS*

GEO. W. SCHELM, B. S., M. D.
Medical Officer, Specialist in Neuropsychiatry,
U. S. Veterans' Hospital
NORTH CHICAGO, ILLINOIS

Arsenic has been used in the treatment of syphilis in various combinations both as organic and inorganic compounds; however, tryparsamide appears to have properties which render it especially desirable in neurosyphilis. It was first used in U. S. Veterans' Hospital in 1923, from which time the data were collected for this series of cases.

Tryparsamide is the sodium salt of n-phenylgylcinamid p-arsonic acid, which was synthesized by Jacobs and Heidelberger in 1915. The first experiments were carried on by Brown and Pearce on animals, which had been infected with trypanosomes and the spirochetes of syphilis. The name is derived from the first syllable of trypanosomiasis, affixing Arsamide to same to designate that it is arsenic in an organic combination. The arsenic content is about 25%.

Moore, Robertson and Keidel found that the drug had little or no value in early syphilis; even in tertiary syphilis its merit is doubted except for its tonic effect because of its feeble spirocheticidal activity. The arsphenamines and allied groups accomplish in one or two doses what tryparsamide does not accomplish in eight or more doses, or not at all.

The qualities of tryparsamide may be briefly outlined as follows:

As shown by experimentation, the spirocheticidal action of the drug is distinctly less than the trypanocidal action.

Tryparsamide has little spirocheticidal value when administered in early syphilis, but due to the property of tissue penetrability, it is found to be particularly valuable in late syphilis.

The drug has little or no irritating action to the subcutaneous tissues; therefore, it can be injected subcutaneously or intramuscularly.

The toxicity is low as shown by the minimal lethal dose being 1.28 gm per kilo body weight. Little or no after effects have been observed. Other observers have reported the development of amblyopia; this however has been found in this series temporary and evanescent. Seldom is the vision permanently lowered, although such cases have been reported.

Mercury in the form of salicylate is used in conjunction with the tryparsamide because of its spirocheticidal effect.

The following technique has been used in the administration of tryparsamide:—the drug as prepared at present comes in 3 gram sterile glass ampoules. The setup requires the following articles:

First—2 medicine glasses
10 cc Leur syringes
Hypodermic needles 19 to 22 caliber
(Needles 1½ inch)
1.250 cc E-flask, with freshly triple distilled water.
Second—4 sterile towels, hand gauze sponges q. s. cotton pledgets or cotton applicators.
Tr. Iodine or 70% alcohol
12-inch rubber tubing ¼ inch diameter for tourniquet
1 shallow pan to hold sterile goods and instruments.

*Address before Lake County Illinois Medical Society, March, 1927. Also before Calhoun County (Michigan) Medical Society, April, 1926.

The above instruments are all sterilized and placed between two sterile towels. The sterile medicine glasses are placed on a sterile towel, one is filled with freshly distilled water (triple distilled); into the other the contents of the ampoule, namely, the tryparsamide, is added. One or more doses may be prepared at once if the work is being done in institutions or clinics where more than one is being treated at a time. For each dose of tryparsamide, 10 cc of water are drawn into the Luer syringe (before fixing the needle) and this forcibly emptied into the glass containing the drug, after which the syringe is used in mixing the drug and drawing it up and expelling it from the syringe. It is only necessary to repeat this a few times, the drug being very soluble. Finally 10 cc of the solution are drawn into the syringe, the needle fixed and the contents injected into the arm, the tourniquet being released after the vein has been entered. Seventy per cent alcohol or a weak solution of tinctures of iodine is applied to the skin at the proposed site of the entrance of the needle. The median basilic or adjacent veins are used because of convenience.

When a series of cases are treated, a separate syringe is used for each case to expedite matters. During the entire procedure, strict attention is paid to asepsis. By following this technique 40 to 50 patients may be treated in an hour.

The technique of giving mercury salicylate intramuscularly is understood by all; variations are introduced by each individual. At the outset of the treatments, mercury salicylate was given in one-grain doses in an oily suspension sealed in glass ampoules. It was found that it was hard to withdraw the contents into the syringe, further the drug had a great tendency to leave the solution and adhere to the container. Placing the ampoule in warm water usually aided but did not remedy the condition. In addition to these objections, there was constant danger of contamination. The following technique was found preferable, especially where many cases were treated:

Mercury salicylate is given in one-grain doses intramuscularly into the buttocks. The suspension is prepared so that each cc of oil (olive oil 75% lanolin 25%) contains one grain of mercury salicylate. Several ounces are usually made up at one time and allowed to stand for several days; each day the contents are shaken. The lanolin content tends to aid in the holding of the drug in the suspension. 5 to 10 cc syringe (Luer) is used. The suspension is drawn up into the syringe to the capacity mark. One cc is administered at a dose, the needles are changed for each patient, this greatly expedites the treatment and still the aseptic precaution can be observed.

It is not necessary to give any special attention to the preparation of the patient to be treated before the tryparsamide is administered. Gastro-intestinal and other symptoms that are often present following the treatment with the arsphenamide group have been negligible.

In the diagnostic classification, general paralysis of the insane is divided into cerebral and tabetic type in accordance with the classification in use by the Veterans' Bureau. Cerebral type includes those cases which show upper motor neurone involvement, exaggerated or spastic deep reflexes, muscular rigidity, tremors, etc., while the tabetic type is characterized by the tabetic syndrome manifesting symptoms of spinal involvement, incoordination, absent reflexes, ataxic symptoms, Argyll Robertson pupils and disturbances of sensation.

In the selection of patients for treatment of these 100 cases, little attention was paid to the type, except that all had a central nervous involvement of some form; in other words, all cases in this series were neuro-syphilitic. Most of these patients had been intensively treated before entering the institution.

In each case, a complete record of the neurological and mental findings were made as well as the blood Wassermann and complete analysis of the spinal fluid; also the eyegrounds were examined before treatment. These examinations were repeated after each course of the two drugs.

In many cases the spinal fluid was taken immediately after each course of treatments and following the six weeks rest period. However, very few changes were noted in the spinal fluid in this period.

All of these cases remained in the hospital during the time that they were treated or observed, which ranged from six months to three years. Those who did not remain a sufficient length of time for two or more courses are not recorded. From the history available of the 100 cases, 51 individuals gave a positive history of an initial lesion, the average length of standing of the disease before tryparsamide was instituted, was ten years plus. Eighteen denied any knowledge of a luetic or other venereal disease, the

other thirty-one did not or were too demented to recall a sore or skin eruption, but several admitted gonorrhea. The minimum duration of the disease was a year and a half, while the maximum was twenty-nine years. Sixty-three cases had had previous antiluetic treatment, ranging from a few intramuscular and cutaneous inunctions of mercury and potassium iodide to sixty or more intravenous treatment of arsenicals. Twenty-two did not give a history of previous treatment, while in twenty-three of the cases the amount of previous treatment, if any, could not be ascertained. In many of the cases the clinical pictures were atypical at the beginning of this treatment, some of the physical, mental, and serological findings having been more or less altered by the amount and type of previous treatment.

A course consisted of eight intravenous injection of tryparsamide gms. 3 and 8 intramuscular injections of mercury salicylate gr. 1. Each drug is given weekly, separated by three or four days. Thirty-one of the cases reported here received four courses each, thirty received three courses each, and the remaining thirty-nine, two courses each of tryparsamide and mercury. Eleven patients were treated with novarsenobenzol during the rest period between the first and second and second and third courses. These cases were selected from those which persistently showed a positive Wassermann test, those who had cutaneous lesions, and others who manifested retrograde changes physically and mentally in spite of the treatment. It has been suggested that arsphenamide or its derivative act as adjuvants to tryparsamide and mercury; again it may be more toxic to the organisms which have gained partial immunity to the latter drugs, provided that the arsenicals or mercurals act directly on the spirocheta pallida.

The following tables have been compiled to show the condition of the patients before the treatment had been instituted and the condition after same had been completed:

TABLE 1-A. MENTAL CONDITION BEFORE TREATMENT

DISEASES:	Dilapidated	Fair	Good	Total
General Paralysis Cerebral type	40	19	2	61
General Paralysis Tabetic type	15	7	3	25
Cerebro Spinal Syphilis	1	10	1	12
Tabes		(Not Psychotic)		
Total	56	36	6	100

Referring to Tables 1-A and 11-B those classified under the mental status as:

First. *Dilapidated*—include fifty-six of the cases that were mentally deteriorated and led largely a vegetative existence. Of this group eleven showed a "marked improvement" over their original state before treatment was instituted; twenty showed a moderate improvement, i.e., they still showed considerable evidence of a psychosis but the improvement was appreciable. Eighteen remained in a stationary condition. They did not show any improvement mentally, neither were there any retrograde changes. Five manifested definite retrograde changes and two deaths occurred during the time that the treatment was carried out.

Second. *Fair*—includes thirty-six cases which were in fair contact with their environment, partially orientated deterioration in memory, retention, education, judgment and emotional fields, with or without delusions or hallucinations, but not those with marked mental disturbances. Of these, fourteen showed a marked improvement reaching nearly their former normal mental level before the disease had left its stains. Ten of this group showed a moderate improvement over their level before they had received the treatment. Nine did not show any improvement, while three manifested definite symptoms of further mental deterioration.

Third. *Good*—there are six cases which were in a state of remission and showed only the

TABLE II-A. MENTAL CONDITION FOLLOWING TREATMENT

	DILAPIDATED						FAIR							
	Improvement						Improvement							
	Marked	Mod.	Stat.	Retro.	Death	Total	Marked	Mod.	Stat.	Retro.	Total	Good	No Psychosis	Total
General Paralysis Cerebral type	8	15	14	2	1	40	10	4	4	1	19	2		61
General Paralysis Tabetic type	3	5	3	3	1	15	3	2	1	1	7	3		25
Cerebro-Spinal Syphilis			1			1	1	4	4	1	10	1		12
Tabes													2	2
Total	11	20	18	5	2	56	14	10	9	3	36	6	2	100

Key to abbreviations used above: Mod.—moderate; Stat.—stationary; Retro.—retrograde.

slightest evidence of any psychosis. Two cases of tabes did not have a psychosis.

TABLE I-B. PHYSICAL CONDITION BEFORE TREATMENT

Disease	Poor	Fair	Good	Total
General Paralysis, Cerebral Type	20	32	9	61
General Paralysis, Tabetic Type.	13	7	5	25
Cerebro-Spinal Syphilis	8	4	0	12
Tabes	1	1	0	2
Total	42	44	14	100

Those classified under the physical condition as:

First. *Poor*—forty-two cases showed some or all of the following symptoms: marked prostration, untidy in personal habits, emaciation, trophic ulcers, prominent neurological manifestation, etc.

Second. *Fair*—forty-four cases showed a disturbance of the reflexes, pupillary changes, mild or no incoordination, changes in facial expression, underweight, but ambulatory.

Third. *Good* — fourteen cases manifesting such symptoms as mild pupillary and reflex changes or slight facial symptoms, but not sufficient to handicap them to any degree.

Table 11-B was compiled from Table 1-B showing the condition of the patients having received from two to four courses of treatment. Of the forty cases classified as in poor physical condition in Table 1-B, nine showed a "Marked Improvement," recovering from their physical and neurological conditions which were present at the beginning of the treatment with the exception of pupillary and reflex changes, which are usually constant and do not entirely disappear; fourteen showed a moderate improvement characterized by improved general appearance, gain in weight, improvement in coordination, less prostration and restoration of sphincter control. Eleven of this group remained in stationary physical condition, no changes being in evidence; six manifested no improvement—in fact their condition was on the decline. There were two deaths in this group occurring during the period that the treatment was being administered.

Of the forty-four cases classified as in fair condition following the treatment thirteen manifested a marked improvement physically, going into state of remission which remained fairly stationary. Nineteen showed a moderate degree of improvement over the condition which was present at the time of admission to the hospital. Ten remained in a stationary condition while two showed retrogressive changes. Of the fourteen cases classified as good, these remained in a state of remission irrespective of their mental and laboratory findings.

The improvement is most noticeable in those patients who are in fair condition at the time treatment is begun, thirty-two of forty-four manifesting improvement under the "fair" heading while twenty-three of the forty-two classified under "poor," showed improvement in varying degrees. This again emphasizes the importance of early diagnosis and treatment.

The improvement is usually first noticeable physically—the mental condition improves more slowly. Considering Tables A and B, there was an improvement in a varying degree in fifty-five per cent. physically against fifty-six per cent. mentally. No complete cures can be claimed but the improvements where indicated in tabulations were very definite both mentally and physically irrespective of the type of neuro-syphilis.

The physical improvements that were noted most frequently were:—gain in weight from ten to sixty pounds; better coordination including improvement in station and gait. Improvement in focal symptoms if they existed, and better articulation. Many of the annoying symptoms of neuro-syphilis disappear or improve, such as convulsions, ulceration, bone and joint involvement, etc., especially if the two drugs were supplemented by one of the arsphenamides group since it appears to act more powerfully on systemic, than on neuro-syphilis.

TABLE II-B. PHYSICAL CONDITION FOLLOWING TREATMENT WITH TRYPARSAMIDE AND MERCURY

	POOR Improvement						FAIR Improvement						
	Marked	Mod.	Stat.	Retro.	Death	Total	Marked	Mod.	Stat.	Retro.	Total	Good	Total
General Paralysis, Cerebral Type...	6	7	5	1	1	20	7	16	7	1	32	9	61
General Paralysis, Tabetic Type....	1	4	4	3	1	13	4	2	1	0	7	5	25
Cerebro-Spinal Syphilis	2	2	2	2	0	8	1	1	1	1	4	0	12
Tabes	0	1	1	0	0	1	0	0	1	0	1	0	2
Total	9	14	11	6	2	42	13	19	10	2	44	14	100

Key to abbreviations used above: Mod.—moderate; Stat.—stationary; Retro.—retrograde.

Mentally, the notable changes for the better are:—increased interest in their surroundings with better contact and orientation. Emotionally, less frequent violent outbursts of excitement. The euphoria and depression are usually less marked when once having been present. The irritability recedes to the background. Many of the cases, after several years have elapsed since their first treatment of tryparsamide, enter into a state where it appears their condition is stationary. They may be in a poor mental and physical state, yet they remain in this condition without improvement or retrogression; in these cases the serological findings are often normal.

Tables III A, B and C and IV A, B and C are the results of laboratory examinations made on the foregoing cases.

Just a word of explanation as to the method used in tabulation. For example, a case which had a strongly + Wassermann after completion of a course, was entered under "positive and remaining positive;" if, after the second course the reaction became negative, it was recorded under "positive rendered negative"; if it remained negative after the third and fourth course, it was recorded under the heading "normal and remaining normal" respectively. When a reaction was "reduced from strongly positive," it was listed under this heading; if however, it remained positive after the next two or more courses, the result was recorded under "positive and remaining positive." The same method was carried out if the results were negative recording them under the "normal" headings.

PERCENTAGE AS TAKEN FROM TABLES III-A, B AND C

		Spinal Fluid Wassermann					Spinal Fluid Cell Count				Spinal Fluid Globulin					Blood Wassermann				
Results after:	Number of individual cases reported	% of cases having negative Wassermann or rendered negative during course	% of positive Wasserman and remaining positive	% of cases having the Wassermann rendered negative during the course	% of cases reverting from negative to positive Wassermann	% of Wassermann reaction reduced from strongly positive	% of cases where cells per cu. mm. were reduced	% of cases where cell count remained high	% of cases having normal cell count and remaining normal	% of cases reduced to normal count during course	% of cases having strongly positive globulin which was reduced	% of cases having positive globulin reaction reduced	% of cases showing positive globulin and remaining positive	% of cases where globulin was reduced to trace	% of cases where globulin was rendered negative and remained negative	% of cases presenting negative Wassermann or rendered negative during course	% of cases positive and remaining positive	% of cases having the Wasserman rendered negative during the course	% of cases reverting from negative to positive Wassermann	% of Wassermann reaction reduced from strongly positive
1st course.	100	12	77	1	0	10	14	71	10	5	16	1	63	19	1	26	64	3	6	7
2d course.	100	14	58	17	0	11	29	24	19	28	18	2	37	39	4	27	29	20	2	12
3d course.	61	28	34—	11	5	21+	21—	21	36+	21—	13+	3+	32+	47+	3+	42+	31	30	5—	6+
4th course	31	35+	26—	7—	6	26	13—	7	51	30—	16+	6	22	41	6+	50+	30—	6	8	9+

LABORATORY REPORTS ON SPINAL FLUID AND BLOOD WASSERMANN OF 100 CASES TREATED WITH TRYPARSAMIDE AND MERCURY

		Spinal Fluid Wassermann					Spinal Fluid Cell Count				Spinal Fluid Globulin					Blood Wassermann				
	Number of cases reported	Negative and remaining negative	Positive and remaining positive	Positive rendered negative	Negative becoming positive	Reduced from strongly positive	Cells per Cu. mm. remaining high	Cells per Cu. mm. remaining normal	Normal count and remaining normal	Reduced to normal count	Positive globulin reduced	Positive globulin rendered negative	Globulin positive and remaining positive	Globulin reduced to trace	Globulin negative	Negative and remaining negative	Positive and remaining positive	Positive rendered negative	Negative becoming positive	Reduced from strongly positive
TABLE III-A																				
Results after:																				
1st course...	31	6	23	0	0	2	8	17	5	1	7	0	17	6	1	13	16	2	0	0
2d course ...	31	7	17	2	0	4	10	5	7	9	5	2	10	13	1	13	12	4	2	0
3d course...	31	10	12	2	0	7	5	4	15	17	5	2	11	13	0	15	13	2	1	0
4th course...	31	11	8	2	2	8	4	2	16	9	5	2	8	14	2	16	9	2	1	3
TABLE III-B																				
Results after:																				
1st course...	30	4	22	1	0	3	2	24	3	1	3	1	17	9	0	7	19	1	0	3
2d course...	30	5	15	4	0	6	8	9	7	6	3	0	9	16	2	8	12	6	0	4
3d course...	30	7	9	5	3	6	3	8	12	7	1	1	6	20	2	11	6	7	2	4
TABLE III-C																				
Results after:																				
1st course...	39	2	32	0	0	5	4	30	2	3	6	0	29	4	0	6	29	0	0	4
2d course...	39	2	26	10	0	1	11	10	5	13	10	0	18	10	1	6	15	10	0	8

EFFECTS OF TREATMENT WITH TRYPARSAMIDE AND MERCURY UPON THE LANGE GOLD CHLORIDE CURVE

	Number of cases	Strongly positive curves and remaining positive	Positive curves reduced from strongly positive	Curves having been reduced returning to strongly positive	Curves rising after having been normal	Curves rendered normal	Normal and remaining normal	Percentages as taken from Tables IV-A, B and C: Number of cases	Percentage of strongly positive curves and remaining positive	Percentage of positive curves reduced from strongly positive	Percentage of curves having been reduced returning to strongly positive	Percentage of curves rising after having been normal	Percentage of curves rendered normal	Percentage of normal curves and remaining normal
TABLE IV-A														
Results after:														
First course	31	22	8			1		100	75	21	0	0	4	0
Second course	31	21	7			2	1	100	55	31	2	0	6	4
Third course	31	18	10				3	61	41—	31	6	3—	13	9
Fourth course	31	15	9		2	3	2	31	50—	30—	0	6	9	6
TABLE IV-B														
Results after:														
First course	30	21	7			2								
Second course	30	12	12	2		2	2							
Third course	30	7	9	2	2	7	3							
TABLE IV-C														
Results after:														
First course	39	32	6			1								
Second course	39	22	12			2	1							

Considering Tables III A, B and C, the earliest and most noticeable changes occur in the cell count of the spinal fluid. In fifty-five of the one hundred cases the count was reduced to normal within one to four courses, the maximum reductions occurring after the second course of treatment. Again, in many of the spinal fluids there was a reduction in the number of cells but not necessarily reduced to a normal count, the extremes varying between two-hundred eighty and nine. The percentage of cell counts remaining high at the end of the first course was seventy-one, which diminished progressively so that only 7 per cent. still had a decided increase at the termination of the fourth course. Ten spinal fluids presented a normal count at the beginning of the treatment and remained so; these are tabulated under the heading "normal count and remaining normal."

The Ross Jones test was employed in the detection of globulin in the spinal fluid. The intensity of the reaction of this test was reduced in many of the cases. A large number of the globulin reactions were reduced to a mere trace, but the percentage in which the globulin was rendered negative is extremely low. This in all probability indicates that meningeal irritation was reduced, but not entirely eliminated.

Eleven cases presented a negative spinal fluid Wassermann at the beginning of the treatment which remained negative throughout the time patients were treated. In twenty-seven of the one hundred cases the spinal fluid Wassermann was rendered negative in one to four courses of treatment, five of these reverting to positive. Under the heading of spinal fluid Wassermann, "positive and remaining positive," the diminution of positives was progressive, namely, 77 per cent. after the first and only 26 per cent. following the fourth course.

The blood Wassermanns in this series manifest somewhat of a different picture than is usually the case with the treatment of tryparsamide. Thirty-four of the positive blood Wassermanns were rendered negative, only six of them reverting to positive. One might think that this high percentage could be attributed to the use of novarsenobenzol used during the rest period. Only eleven cases, as previously stated, were treated with this preparation. Of the eleven thus treated, all had strongly positive Wassermanns, but only three of these were rendered negative during the treatment. This then would have little effect on the percentage. Twenty-three blood specimens of this series of one hundred cases presented a negative

blood Wassermann before treatment was instituted; this large percentage can be explained on the basis of previous treatment or possibly the tendency of the disease of syphilis like other granulomata to be self limiting since a great many of the patients had had no previous treatment. At this point it may be well to stress the importance of making a spinal fluid examination early, especially if any clinical or mental symptoms are present which indicate neuro-syphilis. It appears that the effect of these drugs have been equally beneficial on the blood and spinal fluid. The Kolmer technique was used, employing six tubes in performing the Wassermann test. This allows a qualitative as well as a much more accurate quantative reading. For example, if the reading on the spinal fluid were 444,300; after a period of treatment, the next specimen would show a reading of 430,000, which indicates in all probability an improvement has occurred.

The results of the Lange gold chloride have been tabulated in Tables IV A, B and C. The gold chloride curve is usually the last to show the effect of the treatment. The "strongly positive and remaining positive" curves showed a decline in the number of strongly positive curves after each course of treatment. The cases which have not been reduced or rendered negative in their reactions are tabulated and placed under the heading of strongly positive and remaining positive. The maximum number of improvements occurring after the third course. The term strongly positive is used here as indicating any dilution of the gold chloride solution which has been completely decolorized. In other words, the solution is colorless as represented by a (5) in the curve, irrespective of whether or not it is a luetic or paretic type of curve. By the normal curve we mean those dilutions of the colloid gold curve which show a very slight discoloration, namely—red blue, which is designated by a (1) in the curve, while the preceding discoloration is designated by a (5) in the curve. Twenty positive curves were rendered normal during the treatments, six reverting to positive. A considerable number of curves were reduced from strongly positive as seen by the tables, that is, the gold solution showed less of a reduction in the lower dilutions.

The clinical and laboratory findings usually, but not of necessity, parallel each other. Often, as previously stated, a case may have normal cytobiological findings while the patient may remain in a poor mental and physical condition, but there seems to be an arrest of the disease. Others may show a marked improvement clinically long before there are any manifest changes serologically.

In the treatment of syphilitic patients one is often prone to overlook the general conditions such as:

Oral Antisepsis—including mouth washes, dental treatment where indicated and brushing of teeth.
Hydrotherapy—as indicated for eliminative tonic or sedative effects.
Exercise—outdoor, calisthenics for those who are in fair physical and mental condition, and massage, corrective exercises, or electrotherapy for those who are unable to accomplish the former.
Diet—nourishing, wholesome and special food for those having gastro-intestinal symptoms.
Medication—where indicated such as sedatives, cathartics, etc.

These patients are best treated in institutions where facilities permit all the advantages for the treatment as stated.

The untoward symptoms of tryparsamide are few, the one that has been most mentioned is amblyopia, but the writer has not found this a very prevalent one. In two or three cases it was present but evanescent and of very short duration without permanent impairment of vision. Amblyopia as is known, often occurs in the course of neuro-syphilis and if it does in itself it is not a contra-indication to the continuance of treatment. It has cleared up in those cases without cessation of treatment. Frequent opthalmoscopic examinations should, however, be made and if any subjective symptoms such as dimness of vision, scotoma or restricted field of vision occur these should be thoroughly analyzed.

CONCLUSIONS

Tryparsamide and mercury used in combination had a beneficial effect physically and mentally in over 50 per cent. of the one hundred cases of neuro-syphilis treated.

No cures can be claimed for any in this series despite the fact that some entered into an excellent state of remission, rather the disease appears to be arrested. The treatment prolongs life; it improves or eliminates many of the undesirable and troublesome symptoms and conditions —thus making the patient's life more endurable and occasionally restoring him to a useful social position. The drugs have a more favorable action upon early cases of neuro-syphilis who

are in a fair physical and mental condition. Far advanced and terminal cases show no decided improvement.

Upon the laboratory findings the influence of these drugs is also decidedly favorable, as shown in the case of the spinal fluids where the cell count is first to show a diminution; secondly, in over 20 per cent. of the cases the Wassermann was rendered negative—those that were negative at the beginning of treatment remained so, while many were reduced in the intensity of the reaction; thirdly, the globulin was reduced in intensity of the reaction in a large percentage of cases, but few were rendered negative. The Lange gold chloride test is the last to show the effect of the treatment. In this series 20 per cent. of the curves were rendered normal; in other cases the curve remained stationary or manifested an improvement, only a few showing reverse changes. The blood Wassermann was rendered negative in one-third of the cases in this series, which is higher than other writers using this treatment have found.

The physical, mental and laboratory condition of these one hundred cases tend to run a parallel course, but not necessarily so. An improvement may be noted in one or more of these, while the other or others may be stationary or occasionally show reverse changes. This undoubtedly can be attributed to the anatomical location or the pathological changes produced in the nervous system as a result of the disorder.

Two or more courses of treatment are necessary before any decided beneficial results are obtained. The improvement is usually first noted in the physical condition. Mentally they improve more slowly and often not as completely as in the physical state. Certain of the serological tests often show changes after one course of treatment, while others do not show the effects until several courses have been administered.

Several doses of neoarsphenamine given during the rest period appear to act as an adjuvant to the tryparsamide and mercury treatments.

Careful attention should be given to the personal hygiene and general physical condition of the patient during the antiluetic treatment.

*From the Department of Orthopedic Surgery, University of Illinois Medical School, Chicago.

SCIATIC NERVE PARALYSIS FOLLOWING ALCOHOL INJECTION

A Report of Two Cases*

Walter R. Fischer, B. S., M. D.
Instructor in Orthopedic Surgery, University of Illinois
Chicago

These cases of sciatic paralysis are presented to show the pathology due to a chemical injury of a peripheral nerve and the dangers due to the injection of alcohol in mixed nerve trunks for the relief of neuritis or neuralgia.

Case 1. A carpenter, 51 years of age, met with an accident in 1923. Two months later he developed a severe pain along the course of the sciatic nerve of the right thigh. He made the rounds of physicians and institutions submitting to this and that form of palliative treatment. Finally in December, 1924, six months after his accident, he met a physician who advised the injection of alcohol into the sciatic nerve trunk. The patient, driven to desperation by the constant pain, readily agreed to the procedure with the understanding that the injection might not bring about a cure but would do no harm.

Within one minute after the injection of the alcohol the pain disappeared, the leg and foot became numb and heavy and the patient discovered that he could not move his foot. The day following he left the hospital, but had great difficulty in walking. He was unable to dorsal-flex his foot and he felt as though he were walking on a "wabbly ball." Four days after the injection various paresthesias developed in the foot and leg and lasted for a period of six weeks. Twenty-two months after the injection of the alcohol the loss of function in his foot was still present without improvement.

The physical examination in November, 1926, showed a fairly well nourished adult male about 50 years of age who walked with a peculiar gait. The examination of the right lower extremity revealed foot-drop, vasomotor disturbances, some atrophy of the muscles, disturbances of sensibility and flaccid paralysis of the anterior muscles of the leg and foot. The foot-drop was due to paralysis of all the muscles supplied by the peroneal nerve. Slight adduction of the foot and slight plantar-flexion of the toes was present. Abduction of the foot and spreading of the toes was impossible. The peroneal nerve and muscles supplied by it made no response to stimulation by the faradic or galvanic currents. The ankle-jerk, plantar and toe reflexes were absent, but the patellar reflex however was present and pronounced. Moderate atrophy of the muscles occurred below the knee on the inner and outer borders of the leg. The vasomotor changes resulted in a swelling about the ankle and swelling and redness over the dorsum of the foot, cold

*Read before the Chicago Orthopedic Club, Chicago, December 10, 1926.

dry skin, and a healed ulcer due to shoe injury at the base of the little toe. The sensory changes were quite marked. The area of sensory loss extended along the lateral side of the leg over an area about four inches wide from the head of the fibula down to the external malleolus. Here the area extended forward and spread out over the dorsum of the foot. It included the lateral border from the middle of the external malleolus anterior and the median border from the base of the great toe forward. The entire plantar surface of the foot was also involved except for a narrow strip along its median side. The cutaneous disturbances consisted of insensibility to light touch, localization of touch, discrimination of two points, pinprick, extremes of temperature, deep pain and sense of position of the toes.

The findings in this case illustrate a complete paralysis of the peroneal nerve with some involvement of the tibial nerve.

Case 2. A milk-wagon driver 40 years of age came into the hospital on September 16, 1926, complaining of impaired function of the right foot. He had suffered for eleven months from a severe persistent pain down the course of the sciatic nerve, and submitted to practically every known form of palliative treatment for sciatica. Finally he met a physician who advised an operation. This operation was performed on May 28, 1926, and consisted of an open operation in which the sciatic nerve was stretched and injected with alcohol. When the patient awoke from the anesthetic his entire right lower extremity felt "dead." He was unable to identity the position of his leg and foot and there seemed to be no feeling present. In the course of two weeks his condition improved and he regained some power to flex and extend his knee and to plantar-flex his foot. The wound healed by first intention and the patient left the hospital in a wheel chair on the fifteenth day. He suffered for the following nine weeks from a marked sensation of burning on both the dorsal and the plantar surfaces of the foot. Six months after the operation a condition of foot-drop was still present along with certain disturbances of sensibility on the lateral part of the leg and foot.

The physical examination of both case 1 and case 2 showed the same condition with the exception that in case 2 the patient has regained some power to dorsal-flex the toes.

Five cubic centimeters of 70 per cent. alcohol were used in the injection in case 1 while in case 2 ten minims of 50 per cent. alcohol were used.

A peroneal nerve paralysis was present in both patients but case 1 had in addition some involvement of the tibial nerve. The prominence of the peroneal nerve injury can be explained by the fact that, high up in the thigh, the peroneal portion of the sciatic nerve lies lateral and posterior to the tibial nerve and the nerve to the hamstring muscles. A needle introduced from posterior would strike the fibres of the peroneal nerve first.

Numerous cases practically identical with these have been reported in the literature. They show the same conditions, namely: a persistent sciatica resisting all forms of palliative treatment, and alcohol injection of the sciatic nerve trunk followed immediately by an unexpected persistent paralysis.

Cadwalader[1] said that, "Alcohol destroyed nerve tissues by dissolution, coagulating albuminous materials and dissolving lipoid substances thus bringing an end to the conduction of painful sensations." His report showed that degeneration varied in amount and depended on the extent of contact of the alcohol and the strength of the alcohol solution used. He found that, "25 per cent. solutions of alcohol produced little or no degeneration while 80 per cent. solutions caused profound degenerative effects."

A difference of opinion exists in regard to the action of alcohol on peripheral nerves. This may be due to conclusions derived from inaccurate experimental methods, in which the strength of the alcohol solutions was not constant and the nerve used was in one case a mixed nerve and in another case a purely motor or purely sensory nerve.

Gordon[2] in a series of experiments on dogs used constant factors and demonstrated that the action of alcohol is different on motor, sensory and mixed nerves. He showed that alcohol produced degenerative changes in sensory and mixed nerves while it had no effect on purely motor nerves outside of destroying the perineural tissue.

Cadwalader[1] mentioned in the causes of the sciatic paralysis other factors than the degenerative action of the alcohol such as the direct damage to the nerve fibres by the introduction of the needle in making the alcohol injection and the possibility of a needle causing hemorrhage by perforating vessels within the nerve.

A review of the literature on the subject seems to strongly indicate that good results following the injection of alcohol in the treatment of sciatica have been due to one of two things. Either the alcohol used was in weak solution

1. Cadwalader, W. B.: J. A. M. A., 1915, xxiv, 1892.
2. Gordon, Alfred: J. Nerv. and Ment. Dis., 1914, 81.

or it was injected outside and not inside the nerve sheath.

Foot-drop due to alcohol injection of the sciatic nerve is obviously an avoidable unnecessary accident. A search through the present day literature shows that either alcohol injection is not mentioned in the treatment of so-called sciatica or as in Warbasse's Surgery[3] the fact is mentioned that it is, "contraindicated because of the liability to produce permanent degenerative changes in the motor fibres of the nerve."

9152 Commercial Avenue.

SOME MINOR INJURIES WHICH TOO FREQUENTLY RESULT IN PERMANENT DISABILITY*

F. P. HAMMOND, M. D., F. A. C. S.
Instructor of Surgery, Northwestern University; Surgical Staff, Washington Park and Wesley Hospitals
CHICAGO

We well remember one of our teaching professors while in medical college expressing surprise at the large percentage of student's questions for information directed more or less toward rare pathological conditions rather than to the more common affections of the human body. The latter conditions would, he knew, engage 90 per cent. of their scientific effort after getting out into practice. I quote from the report of the Commission on Medical Education. "To much of the clinical teaching is from the standpoint of the specialist and on rare diseases, and not enough from the standpoint of the needs of most patients." "The divided responsibility for the care of patients and the impersonal attitude so frequently taken toward patients in the hospital and clinic handicap the preparation of students for the assumption of individual responsibility required in practice and for the large emotional and psychologic factors seen in many illnesses."

We practitioners are not altogether different in our inclinations than the student. It seems natural and really seems more interesting to study and research into more or less rare conditions of morbidity. But I hope you agree with me that we should spend more time than we do in discussing and learning about the common every day problems. At least we ask your indulgence for a brief time while we discuss with you some frequently occurring conditions and methods of treatment that in our experience will aid in reducing the liability of permanent disability.

Considering our subject "some minor injuries which too frequently result in permanent disability" we shall confine our talk today principally to the hands, wrists, feet and ankles. It is obvious that the line between minor and major conditions cannot be sharply drawn so if some seem to approach upon the major field we hope you will keep this thought in mind.

Skin Nature's Protection. The most virulent micro-organisms may rest on the surface of the skin and be harmless unless an avenue of entrance to the soft tissues is made.

The Natural Powers of self protection of body tissues against the harmful activity of germs is in this day recognized and respected. A strong antiseptic tends to interfere or destroy this self protecting force.

Knowing as we do the danger of certain bacteria when coming in contact with the broken skin, we are not backward to state that every possible precautionary measure of treatment should be instituted in order to save our patients from complications, disability and possibly loss of life itself.

It is our firm belief that in all conditions when virulent or non-virulent bacteria have gotten under the skin and into the soft tissues, ample drainage is the treatment par excellence. By ample drainage we mean incision or incisions wide enough so that the line of least resistance to that infection is outward into sterile wet compresses. Drainage is not ample when incisions are so small that compression is necessary to express the retained pus.

Aspiration Drainage Devoid of Pressure is one method of evacuating pus from pockets and sinuses. Injecting a non-irritating antiseptic solution into the wound, after aspirating the pus, and without pressure and then aspirating it two or three or more times removes the majority of the foreign material and allows the protecting and healing tissues to surmount the invading enemies.

Paronychia: Infections about the roots of finger nails should not only be incised but a triangular section of soft tissue removed from both corners extended to proximal corner of

*Read before Illinois Society of Industrial Medicine and Surgery, Moline, Ill., May 31, 1927.

3. Warbasse, J. P.: Surgical Treatment, 1920, i, 878.

root then the proximal ⅓ of the nail should be removed. If allowed to proceed without ample drainage and removal of devitalized portions of nail, infection may penetrate from matrix to periosteum with resulting osteomyelitis and loss of distal phalanx. If properly treated early there should be no temporary disability, as the tip of the finger is protected by the distal ⅔ of the nail.

Whitlow of the subcutaneous type involving the pulp of the tips of the fingers is a condition that too frequently results in a stiffened distal joint or loss of distal phalanx. Too frequently drainage is attempted by a longitudinal incision, forgetting the trabeculae which courses tenaciously from skin to periosteum. Through and through incision almost from distal joint to tip of finger is essential for ample drainage. A sterile rubber band drain is handy and most useful. The removal of one inserts the other. Irrigation, aspiration drainage, wet compresses.

Whitlow of the Thecal Type of periostitis only develops when preceding treatment has been inadequate. Treatment is the same as above stated except irrigation and aspiration thrice daily. After periostitis has been established removal of the distal phalanx will be found necessary, a permanent disability occurring too frequently.

Puncture and Lacerating wounds of the fingers which are insufficiently drained may penetrate to the tendon sheaths. Leaving the first point of inadequacy we will consider now tendon sheath infections. Incisions should be made along the side, through and through if necessary, so the line of least resistance for the infective material is outward. The transverse bands at joint flexions under which the tendons move should never be incised. The day convalescence begins passive movements of the affected finger should be begun and kept up with increasing diligence until entirely healed. Physiotherapy may be added even before the soft tissues are entirely healed.

A limitation in flexion or extention is a permanent disability which too frequently occurs.

Lumbricale space infection is sometimes the most deceiving to the inexperienced. One or more spaces may become the seat of purulent infection as a result of the most minor injury anywhere in the region of the proximal phalanx. Or it does apparently develop without the slightest history or evidence of injury.

It not infrequently develops from a callus at palmar base of a finger which per se looks innocent of the cause. Throbbing pain, loss of grasping power because of pain, swelling between the knuckles on back of hand and a definite point of tenderness over area of space by dull point pressure makes the diagnosis.

Elliptical incision, drain (not packing), wet sterile compresses, heat and daily or more often irrigation and aspiration drainage will result in temporary disability of only ten days and no permanent disability. Again ample drainage is essential before infective process is allowed to penetrate into the spaces of the hand.

Many times we have operated on a lumbricale space infection under "Bulgarian" anesthesia (no anesthesia, preparation complete, quick incision), and "nipped in the bud" what may develop in twenty-four hours into a condition that would threaten permanent disability.

Hand space infections resulting from puncture or lacerating wounds first develop because of inadequate drainage. Wide incisions (elliptical) with through and through rubber drains, hand soaks, irrigation and aspiration drainage stop the progress and decrease the convalescent period. Passive motion of the fingers all through the period of healing and vigorous physiotherapy will prevent adhesions causing limitation of flexion and extention and permanent disability.

Whenever there is a tendency toward contraction the fingers and wrist should be put up in hyper-extention during the interval between treatments.

Lacerated Tendons are the cause of the larger percentage of permanent disability cases of any condition relative to the hand and fingers in our experience. The reason likely is because it takes three weeks for a tendon to heal sufficiently to allow even passive motion with traction on the sutured tendon. Obviously a sutured tendon must be relaxed during healing. If a flexor tendon, the finger during healing is kept flexed, while if it is an extensor, the finger must be kept extended. Now, in order to obtain normal function or the least possible permanent disability the operation must be aseptic. Everything possible must be done to obtain and maintain a clean wound. Allow for fairly secure healing and gradually increase movements at *daily* sessions. Heat and massage with passive and active motion will ultimately result in normalcy.

Nail Puncture Wounds of the Foot after cleansing should be probed for direction and depth. A narrow blade bistoury is placed into the wound and incised outward in three directions. The wound should be cauterized with 95 per cent. phenol followed by alcohol, small drain and dry dressing. Seldom is there swelling or pain sufficient to cause even a day and at the most not more than two to four days of temporary disability. This procedure precludes the danger of tetanus.

Fractures of the Middle and Proximal Phalanges only need consideration in this paper if they are compound and oblique and over-riding. Buck's extention so applied as to allow for treating soft parts remembering *ample drainage.* The fluoroscope and x-ray will tell when traction is sufficient. Joint movements should be begun the second week—vigorously after the third. Proper physiotherapy treatments will insure normal function in most cases.

Fracture of the Metacarpal Bones cause permanent disability principally by healing with an angulation convexly toward the palm. Whether traction is necessary or not the palmar surface should be padded so as to maintain its normal curvature, even at the expense of a convex protrusion posteriorly. An angulation toward the palm or over production of callus on the palmar surface of a metacarpal bone in a laboring man's hand often causes permanent disability from pressure pain.

Fracture of the Carpal Bones, especially the navicular, the wrist should be immobilized about three weeks. It has been shown by Kellogg Speed and others that the navicular is the one most frequently fractured. The circulation is disturbed and if not immobilized over a sufficient time there will be non-union and a permanently disabled wrist. Physiotherapy after three weeks will usually restore normal function.

Fractures of the Wrist, that is the lower ends of the radius and ulna, should consume no more time than to say that passive movements should be started within a week after reduction, reapplying the splint. Between the second and third weeks the splint may be left off. Vigorous physiotherapy after the third week.

Fracture of the metatarsals again is very important in order to avoid permanent disability by avoiding angulations toward the plantar or walking surface of the foot. If angulation cannot be avoided or over production of callus, be sure it is toward the back or upper part of the foot.

Dislocations can usually be reduced by closed method, though finger dislocations in rare instances require open reduction. Joint movement should begin the second week after carefully removing the splint. Replace the splint and repeat the operation tri-weekly. This procedure should not be turned over to an inexperienced assistant.

Antitetanic serum is seldom used because of the unqualified procedure of ample drainage. In deep puncture wounds we inject 1500 units. It has been five years since we have seen a case of tetanus. That case resulted from an unsuspected compound fracture of a finger.

Burns cause permanent contraction disabilities much less frequently than in former years. Constant tension opposite to the healing burned area is the essential point. After a destructive third degree burn of considerable extent a pedicle flap skin graft with subcutaneous fat may be necessary to avoid an inevitable contracture.

In Conclusion let me say that to obtain the utmost confidence of the patient in you and your treatment is of prime importance. His cooperation is essential. It is next to or almost as important as frequent personal attention of the surgeon himself. A mistake too frequently is made by allowing nurses or unqualified assistants to follow convalescing patients. The lack of specific attention and personal treatment too often results in stiffness, contraction and immobility.

PATHOLOGICAL CONDITIONS FOUND RADIOGRAPHICALLY WHICH ARE OFTEN CONFUSED WITH INJURIES

J. S. YOUNG, M. D.
Roentgenologist
EAST ST. LOUIS

In considering a subject which is apropos for this occasion it is difficult to make up one's mind just what should be chosen as it is perplexing to present new facts at this time. However, I have chosen for my subject "Pathological conditions found radiographically which are

*Read before Southern Illinois Medical Society.

often confused with injuries." This subject, to my mind, appears to be one of the outstanding difficulties of today, as every clinician and every radiologist has been confronted with this problem.

I shall not attempt to go into the subject of the aggravation of pathological conditions, but shall merely state facts as they have confronted me in my own work. Neither shall I attempt to differentiate between pathological conditions and diseased processes except in cases where the explanation is necessary. Neither shall I attempt to mention all the diseased processes which are confused with traumatic conditions, but just a few which I consider paramount. In a general classification we will consider the following:

1. Hypertrophic osteo-arthritis. The name itself suggests an inflammatory condition involving both bony structure and joint with hypertrophic changes. I consider this the first of the list because it is most frequently confused with trauma or malformation produced by injury, but in a finer analysis of the radiographic study, one finds a marked difference regardless of history, although history should be taken in these cases to give the surgeon an idea whether to suspect a fracture or not.

A. In an injury one usually finds a definite line of fracture which later on, in the healing process, shows a callus in the region of the fracture line which is definitely localized and does not resemble a pathological bone hypertrophy, but it is simply the normal physiological healing process which holds good in most cases, depending, of course, on the location. The reason I refer to location is because there are certain fractures in which we are never able to demonstrate callus at all. Of course, the differentiation is simple; in this case it could not be confused with a hypertrophic change.

B. Hypertrophic osteo-arthritis is usually found to involve more than one joint. It always involves the margin of the synovial cartilage of the joint. This is possibly due to a primary degeneration of the cartilage, which afterwards undergoes an osseous change with hypertrophy. This condition may be localized to one joint, but this is rare. However, if it is found in one joint only, it shows a rather characteristic radiographic picture which can easily be differentiated from a callus thrown out from a fracture.

It was once thought that hypertorphic spondylitis was a disease that went hand in hand with old age, but this is not true. We have been able to demonstrate the condition in persons as young as 22 years of age, in which cases there were no histories of injury. I am, therefore, fully convinced that this condition is produced by a focal infection and it is progressive; consequently, as the patient grows older and still carries a focal infection, the disease naturally progresses with age.

I am also further convinced that this condition is in no wise produced by trauma.

2. Sacralized transverse processes. This condition is, of course, congenital and presents a radiographic picture which should not be confused with injury. The condition may be unilateral or bilateral. If unilateral one usually sees a large transverse process on one side whose lower margin almost touches the upper portion of the lateral mass of the sacrum; while on the opposite side this transverse process is absent or in other words, it has fused with the lateral mass of the sacrum to form one solid bony mass. When the sacralization is complete and one bony mass is formed it is easy to differentiate, but there is often a joint at the juncture of the lower portion of the transverse process and the upper portion of the sacrum, which runs at right angles to the long axis of the spine. We will, for convience's sake, call this a false synchondrosis due to its similarity to the sacro-iliac joint. This joint is often diagnosed a fracture, but it is a congenital condition as described above.

3. Tuberculosis. This disease is often confused with trauma and especially when it involves a joint. The condition, however, presents a characteristic radiographic picture. First of all, there is no line of fracture but what one sees is a cloudy indistinct shadow which usually involves a joint. This condition may be confused with lues, but the history will, in this case, differentiate the two conditions; therefore, tuberculosis has a definite characteristic appearance, radiographically, and in a careful consideration, should not be confused with trauma.

4. Kummel's disease. This is often confused with a compression fracture of one of the vertebrae. It may be found in any portion of the spine, but it is usually in the lower dorsal region. I will not say positively that trauma is not the origin of this condition, but I doubt it seriously. If trauma produces this condition it is evidently

produced in the earlier period of life. But this disease is often found in cases where there is no history of injury at all. The radiograms show a definite narrowing of the body of the vertebrae from above downward; in fact, the vertebrae takes upon itself the form of a small wedge, the apex of which points forward. No line of fracture can be made out, neither is there any spreading of the body substance.

Contrary to Kummel's theory of trauma, I am of the opinion that this condition is produced by some variety of infection (endocrines may play some part). I cannot conceive of a traumatic condition of sufficient force to cut the nutrient artery and yet not produce symptoms which the patient is able to remember. He frequently says he has never had any trouble with his back at all.

5. Hodgkin's disease. This condition, of course, rarely involves bony tissue. I have only seen one such case, but even at that I consider it of enough importance to mention in this connection. Physical examination plus the radiographic findings makes the differentiation easy.

6. Tumors, malignant and non-malignant. First I shall consider malignancy, and let me say here that sometimes the differentiation is very difficult, especially in a case where a patient gives a history of trauma, but the differentiation can be made by taking everything into consideration. Malignancy may be local or it may be a general bone involvment from metastasis. Of course, where there is a metastatic process, the differentiation is simple and need not be confused with trauma. But when the malignancy is a local affair it is often diagnosed injury, and one should take into consideration a few points.

First there is no line of fracture, but usually a large mass which may be differentiated from one type or the other of malignancy. Carcinoma should not be considered as it is always metastatic. Sarcoma: In case of the spindle cell or giant cell, there is no bony production, there being no bony production nor any line of fracture the differentiation is easy. In the periosteo and the osteo-sarcoma there is always a bone production, but they both show characteristic radiographic findings by which the differentiation can be easily made. In the non-malignant types there are the osteoma, the osteo-chondroma and the bone cyst. The bone cyst, of course, shows a definite picture which is characterized by the enlargement of the medullary canal. No line of fracture. The osteoma shows a definite enlargement of the bone which is usually an oval-shaped mass growing from the cortex, with no line of fracture. The osteo-chondroma is usually located near a joint and is composed both of cartilaginous and osseous tissue. In other words, it presents a radiographic picture somewhat irregular, naturally its variation in density depends upon the specific gravity of the tissues which form it, i. e., bone and cartilage. It is characteristic and shows no line of fracture. This is usually the type of bone tumor in which pathological fractures are seen.

7. Syphilis. This produces a characteristic radiographic picture with no line of fracture. Periosteum is always involved, usually thickened, honey-combed, with punched-out areas in the bone itself. The history usually makes the differentiation in connection with the radiographic findings.

8. Osteomyelitis. This is characteristic, usually involving the periosteum in its earlier stages and the bone itself later on. It is always confined to the shaft of the bone. No line of fracture.

9. Atrophy or osteoporosis, from disuse or infection. This is a true absorption of the bone. It may be brought about from disuse due to disturbance in the circulation of the blood supply of the bone; or it may be brought about by infection. It must be remembered, however, that there is a general atrophy from old age; this is general however throughout the entire bony structure of the body and should not be confused with localized osteoporosis from either disuse or infection. They both present characteristic radiographic findings, and no line of fracture can be made out.

The disuse atrophy is frequently seen in bones in cases where patient has been treated for a fracture and the part has been left in splint too long, for instance a person may be treated for a fractured hip and show a disuse atrophy of the ankle. This should never be confused with trauma.

10. Osteomalacia. This condition is more frequent in females than males. It is as a rule general and characteristic. The bone absorbs in striations, so to speak, the striations running parallel to the long axis of the shaft. No line of fracture can be seen. The cause of the condi-

tion is unknown but it is evidently not produced by trauma; it is often associated with pregnancy, but when localized areas are examined, it is often diagnosed as an injury.

11. Ostiitis. This is an inflammatory condition of the bone as the name implies. Apparently there is no involvement of the periosteum, but it is confined truly to the cortex. This may be specific or non-specific. It is difficult to differentiate from an x-ray standpoint between the two. The radiograms in both instances show a characteristic picture, they show eaten out areas or areas of bone absorption. No line of fracture can be demonstrated in these cases.

12. Spondylolisthesis. This condition in its mildest form is often overlooked and often cannot be made out by physical examination, and naturally must be an x-ray diagnosis unless the case is so pronounced that it is obvious. There is no line of fracture. The x-ray shows that one of the lower lumbar vertebrae, usually the last one, has slipped forward. In its first stage, the upper portion of the sacrum goes with it, making a marked lordosis in this region. In the more advanced stage, the vertebrae slips entirely in front of the sacrum, the sacrum then tilts backward. This in my opinion is a congenital affair, as to my personal knowledge there are cases in which patients have never known that they had the condition until it was discovered in a routine x-ray examination. The examination being made for some other condition and this condition, of course, is discovered accidentally.

This paper is not written in the form of a criticism. It is written rather to call attention to some of the real problems which confront roentgenologists, as well as the examining physicians, and on which points they should have better understanding and, if possible, much closer cooperation.

APPENDICITIS COMPLICATING PREGNANCY

AIME PAUL HEINECK, M. D.
Surgeon to the Frances Willard, Washington Park, Lakeside and St. Paul Hospitals
CHICAGO

Appendicitis is frequent and doubly significant during the child-bearing period. It, not uncommonly, complicates and unfavorably influences pregnancy; at times, it provokes the premature termination of gestation. Appendicitis occurring during gestation can prove fatal to the mother, to the fetus, or to both mother and fetus. It is well deserving of study by the gynecologist, the obstetrician and the surgeon. All the various grades and varieties of appendicitis—primary or secondary, acute, subacute, chronic or recurrent catarrhal, ulcerative, suppurative, gangrenous, perforative or adherent—and its various complications and sequelae, adhesion formation, abscess formation or peritonitis, localized or generalized, occur during gestation. The morbidity and mortality of appendicitis is greater in the pregnant than in the non-pregnant. Early and correct diagnosis, followed by immediate appropriate and skilful surgical relief, will reduce both the morbidity and the mortality of the disease under consideration.

This contribution is an analytical study of all the operative cases of appendicitis associated with gestation, intra- and extra-uterine, reported in the English, French and German medical literature from 1916 to 1926 inclusive.* In the ILLINOIS MEDICAL JOURNAL, April 1917, xxxi, 215, I published a similar study of 173 operative cases of appendicitis associated with pregnancy, reported from 1900 to 1915 inclusive.

This analysis of 405 cases of appendicitis diagnosed either at the operating table or established by the postmortem findings, amplifies and supplements my previous publication. They occurred in 405 pregnancies, 21 of which were ectopic in location, while the remaining 384 cases were intra-uterine.

Appendicitis complicating the puerperium is not considered in this paper; it imperils only the maternal life and constitutes a separate chapter of appendicitis. Uterine gestation complicated by appendicitis presents two indications: The saving of the fetal life and the saving of the maternal life. Of the two, the latter is paramount.

Cases in which the diagnosis of pregnancy was not fully established at the time of operation were also excluded. Tracy[5] removed an acutely inflamed appendix from a stout nulliparous woman. She had missed her menstrual period for a few days. It was not possible, previous to or at the time of operation, to make a positive diag-

*All the medical publications that are to be found at the John Crerar Library, Chicago, Ill.

nosis of gestation. Time settled the question; she was delivered at full term.

Cases in which the products of conception were expelled from the uterus previous to the development, diagnosis or surgical intervention for the relief of appendicitis were omitted. In a twenty-one-year-old primipara,[35] labor pains appeared during the ninth month of gestation: the cervix dilated and spontaneous delivery of a non-viable child occurred. The abdominal pain continuing and the general symptoms becoming worse, appendectomy was performed on the following day. Inflammatory products escaped from the abdominal cavity and death of the mother occurred six hours after from general peritonitis. Needless to say that we also excluded cases in which the removed appendices were found, after careful examination, to be normal.[37]

Pus collections, presumably of appendiceal origin, evacuated by colpotomy were excluded, unless the diseased appendix was exposed to inspection or direct palpation. This explains the omission of cases similar to that reported by Favreau and Chaput[19] in which 500 grammes of dark brownish pus were evacuated by colpotomy. The appendix not having been exposed, the clinical diagnosis of appendicitis was only presumptive and not conclusive.

EXTRA-UTERINE PREGNANCY

Extra-uterine gestation, aborted, ruptured or in progress, abdominal or intra-ligamentary, ovarian, tubal or tubo-ovarian, calls for immediate removal of the ectopic fetal sac, irrespective of the age of the pregnancy or of the mother's general condition. This is a life-saving indication. In ectopic pregnancy, the life of the fetus is to be disregarded. Appendicitis, irrespective of type, calls for surgical treatment, ablation of the appendix preferably.

Ectopic pregnancy occurs at all periods of the child-bearing age. Ectopic pregnancy and appendicitis are surgical conditions, each calling for immediate operative relief. When the two conditions coexist, the call for surgery is twofold: The fetal sac and the diseased appendix should be removed at the same sitting. This double removal is the procedure of election; it was instituted in twenty of the cases herein considered and was followed invariably by recovery. Some clinicians follow a different course. Gore's[21] patient presented the symptoms of appendicitis; the point of greatest tenderness was four inches to the right of the umbilicus and about one inch above. Bimanual examination showed a soft cervix, admitting the tip of one finger. Child's head was felt through the lower uterine segment. Patient complained of excessive fetal movements. During examination, vigorous movements were observed through the abdominal wall. The appendix was removed. On the 7th postoperative day, it was decided, after consultation, to deliver the patient. The patient having been etherized, manual dilatation was begun, and the uterus was found empty. A laparotomy was then performed; the peritoneal cavity contained blood-stained fluid and a large, bluish tumor the size of a six-months pregnant uterus, attached to the right broad ligament by a small twisted pedicle. This sac-tumor had made two complete turns on the axis of its pedicle and had the odor of degenerating blood. The pedicle was clamped, the stump transfixed and ligated, and the tumor removed. Examination of pelvic organs showed uterus in normal position, enlarged to three times its normal size. Left tube and ovary normal. Drainage; abdomen closed in usual manner. Tumor which included the right tube and ovary contained a six-month male fetus, apparently dead for thirty-six or forty hours. In four cases[23, 25, 39] the inflamed appendix and the ruptured fetal (tubal) sac were removed at the same sitting. In these four cases as in all tubal pregnancies that rupture into the peritoneal cavity, peritoneal flooding was present. In three cases[29, 39] of incomplete tubal abortion, the tube, the products of conception and the inflamed appendix were all removed at the same sitting. The appendicitis that coexists with ectopic gestation is usually chronic. All but two patients gave a history of having had previous attacks of appendicitis. In most cases, the appendix was found to be adherent to some adjacent organ or structure: Omentum, right tube and ovary, uterus, or urinary bladder.

Age. Appendicitis occurs at all periods of the child-bearing age; its incidence is possible in any gestation, first, subsequent or last, uterine or extra-uterine, single, twin or multiple. In the cases herein analyzed, the age incidence is reported as follows:

From 15 to 20 years	46 cases
From 21 to 25 years	107 cases
From 26 to 30 years	100 cases
From 31 to 35 years	63 cases
From 36 to 40 years	25 cases
From 41 to 45 years	3 cases
46 years	1 case
Age not stated	60 cases

In the above cases, the age stated is that of the patient at the time of operation. The three youngest patients were 15 years (one-32) and 16 years (two cases) of age, respectively. One of the last two patients was operated on after the acute symptoms had subsided;[25] the other, during the acute attack.[39] The oldest patient was 46 years of age.[39]

No relation was observed to exist during gestation between the age of the prospective mother and the extent, virulence and outcome of the appendiceal inflammation. More than one-half of the cases occurred between the ages of twenty-one and thirty, inclusive.

PREGNANCIES

Primipara	36 cases
II-parae	143 cases
III-parae	74 cases
IV-parae	6 cases
V-parae	4 cases
VI-parae	2 cases
VIII-parae	2 cases
IX-parae	1 case
Multiparae	2 cases
Not stated	135 cases

One patient[8] presenting a five-month-pregnant myomatous uterus, had never had any living children, but had had two miscarriages. Another patient was a three-month-pregnant multipara.[9] In 135 cases, the reporters do not state whether their patients had previously been pregnant. In 143 cases, over one-half of the cases in which the number of pregnancies is reported, the inflamed appendix was removed in the second gestation. Seventy-four cases occurred in III-parae.

Period of Gestation. The more advanced the gestation, the greater the probability of its interruption in the presence of appendicitis. It is hard to establish the exact age of a gestation; it is equally difficult to determine the age of the fetus at the time the symptoms of appendicitis first become manifest. Appendicitis occurs at all periods of gestation. In our collected cases, the maximal frequency was observed during the second (64 cases), third (83 cases) and fourth month (75 cases). It is rare in the last few weeks of pregnancy. The subjoined table shows the age of the pregnancy at the time of operative relief of the appendicitis.

1st month	8 cases
2nd month	64 cases
3rd month	83 cases
4th month	75 cases
5th month	44 cases
6th month	42 cases
7th month	23 cases
8th month	25 cases
9th month	11 cases
10th month	5 cases
Not stated	25 cases

In case 12, an appendectomy was performed during the active stage of labor. The first day of last menstruation and the descent of the uterus in the thirty-eighth week indicated that the expectant date would lie between July 15 and 20. The symptoms of appendiceal disturbance began on the 15th. On the same day, the patient began to complain of definite, infrequent and irregular girdle pains, beginning in the "small of the back" and migrating forward and downward to the hypogastrium. Examination revealed a beginning dilatation of the cervix. On the 17th, the appendix in the pre-perforative stage of gangrene and containing two drams of pus was removed. Nine hours after operation, labor was complete.

Pathology. The appendix, in the gravid or non-gravid state, often presents variations in size, length, mobility, location and contour which are not without influence on the course of appendicitis. Not uncommonly, old or new inflammatory adhesions bind the appendix to contiguous organs; these adhesions may be so firm and so extensive as to make the operative procedure tedious and difficult. Chronic appendicitis is often productive of adhesions that interfere with the enlargement of the uterus, with its emergence from the pelvis, with the uterine contractions at time of labor. These adhesions play an important rôle in the etiology of oophoritis, abortion, subinvolution and extra-uterine pregnancy.

Associated conditions not infrequently occur. They antedate or complicate the appendicitis and aggravate the prognosis. Salpingitis, unilateral or bilateral, was noted by Jerlov[32] in at least 15 per cent. of the cases; ovarian tumors: dermoid,[37] papillary and other cysts[39] are not uncommon. Case 3 presented, in addition to the appendicitis and the gestation, an ovarian dermoid cyst four inches in diameter, containing sebaceous material, six teeth and some hair; case

7 presented a man's-head sized ovarian tumor. All varieties of ovarian tumor, dermoid cyst in particular, may complicate pregnancy. They call for immediate operative removal, because they increase the probability of abortion and may hinder delivery. Ovarian tumors and cystomata may be the seat of torsion, gangrene from pressure, rupture and suppuration and can determine accidents fatal to the mother and to the fetus.[7]

Inflammation has manifold manifestations and various terminations. It terminates either in resolution, fibroid thickening, ulceration, suppuration or gangrene. An inflammation involving the whole thickness of the wall of a hollow viscus, such as the appendix, may result in perforation. Because inflamed appendices present various grades of inflammation, classifications based upon the preponderating lesion lack precision. When gangrene was the preponderating lesion, the appendicitis was classified as gangrenous; if a perforation existed, the appendicitis was classified as perforative.

Many serviceable classifications of appendicitis have been proposed. We have adopted the following, though conscious of its shortcomings:

Acute catarrhal, with or without ulceration	108 cases
Acute suppurative without abscess formation	3 cases
Acute suppurative with abscess formation	7 cases
Acute suppurative with circumscribed suppurative peritonitis	70 cases
Acute suppurative with diffuse suppurative peritonitis	28 cases
Acute gangrenous	52 cases
Acute gangrenous with abscess formation	1 case
Acute gangrenous with diffuse peritonitis	1 case
Acute perforative	5 cases
Acute perforative with gangrene	3 cases
Acute appendicitis and acute gonorrheal salpingitis with peritonitis[5]	1 case
Chronic with adhesion formation	14 cases
Chronic without adhesion formation	11 cases
Chronic: No mention made of the presence of adhesions	66 cases
Too briefly reported	35 cases

In the suppurative form, the pus was present either in the lumen of the appendix,[12] in its wall or in the form of a peri-[23] or para-appendiceal[3] abscess. Several retro-cecal abscesses are reported.[16] "Large appendiceal abscess extending above to the navel and beyond the mid-line."[10] The appendix may be adherent to the posterior abdominal wall,[3] to the ascending colon,[30] to the right adnexa and uterus,[7] to the right tube,[39] to a fetal cyst,[25] to the omentum, intestine and tube,[23] may be buried in inflammatory tissue,[6] etc.

In operating on cases of appendicitis, one notices the presence of a peritoneal exudate, localized or diffuse, varying in quantity and in nature in different cases: Serous,[29] serous with numerous flocculi,[6] purulent,[22] etc.

Diagnosis. Appendicitis occurring during gestation often offers diagnostic difficulties not present in the non-gravid state. Mild attacks are often misdiagnosed; they are mistaken for the digestive disturbances incident to the onset of pregnancy or for some of the other discomforts of gestation, such as can be caused by congestion of the ovaries, stretching of the uterine ligaments, etc.

According to the acuteness and duration of the symptoms presented by each individual case, 279 cases were acute and 91 chronic; in 35 cases the reports are incomplete and do not permit exact classification.

The symptoms of appendicitis in the gravid state are those of the disease in the non-gravid state, with variations determined by the age of the pregnancy, the fetal movements, the changed abdominal conditions, etc. Coincident pathological conditions modify and blur the clinical picture. Pyelitis (unilateral[37] or bilateral[36]) is reported as having coexisted in a few cases.

During pregnancy, especially from the fourth to the seventh month, pain in the right iliac region is common. Not infrequently it is due to traction exerted on peritoneal bands and adhesions by the enlarging uterus. The ascending uterus can displace the colon, cecum and appendix upward[32] (six cases), forward or backward and outward. The upward, forward or backward and outward displacement of the cecum and appendix occurs only in a fraction of the cases; it interferes with proper drainage of the appendiceal region and, in the later months of pregnancy, is of diagnostic and operative concern. Adhesions due to a previous inflammation bind down the appendix, limit its mobility and prevent its displacement. Abdominal pain must not be misinterpreted; its importance must not be misjudged. Pain and digestive disturbances call for proper recognition and interpretation. A patient should neither be subjected to the dangers of a needless operation nor deprived of the benefits of an indicated one. In appendicitis, the site of maximal pain and tenderness always corresponds to the location of the appendix[10, 12, 15, 19, 21, 24] etc. If the latter be a pelvic organ,

the site of the pain is pelvic; if an abdominal organ, the pain is abdominal.

In the non-gravid female, the appendix has been found in all parts of the pelvic and abdominal cavities; in pregnant women, variations of location are less uncommon. The appendix has been found in the right lumbar region,[16] in the left side of pelvis,[5] immediately beneath the liver.[27]

The initial pain is felt in the upper abdomen or epigastrium;[15] in most cases, it becomes gradually localized to the location of the diseased appendix,[20] usually, the right iliac quadrant. In the acute forms, the pain is sharp and lancinating in character and frequently radiates down the right thigh. In the subacute and chronic forms, it is more of a constant dull ache. It may intermit.

The most reliable symptoms are: Localized pain, localized tenderness, and localized muscular rigidity over the region of the appendix, usually, the right lower abdominal quadrant. The symptoms: Fever, rapid pulse, chills;[9] leucocytosis, nausea and vomiting are of less diagnostic value, because they are frequently absent in early cases, occur in many other disturbances incident to the period of gestation, and are characteristic only after the infection has begun to spread. If perforation occurs or pus collects, palpation usually detects a tumor mass. In appendicitis, abdominal pressure so made over the descending colon as to force gas toward the head of the cecum, increases the pain (Rovsing). It is most important to elicit a careful history and to obtain an accurate report of previous attacks. Patients who, prior to gestation, have had appendicitis treated non-operatively suffer, more or less, disturbance in the appendiceal region during pregnancy. One hundred and sixty-three cases gave a history of one or more previous attacks[3, 4, 6] etc. The value of leucocytosis as a diagnostic aid is lessened by the fact that, in pregnancy, a leucocyte count up to 12,000 is not pathologic. Nevertheless, a high leucocytosis with a high polymorphonuclear count, if associated with other symptoms of appendicitis, is very suggestive of the existence of the disease. We find reported a leucocytosis of 16,000 with 87 per cent. polynuclear,[32] of 18,000,[18] of 22,000,[24] or 23,500.[22]

In the latter months of pregnancy, an early and correct diagnosis may prove, at times, very difficult, especially when the appendix is displaced immediately beneath the liver. Diseases of the gall-bladder, of the right kidney, of the stomach, of the liver, of the uterine adnexa simulate appendicitis and confuse the clinician. All these affections must be considered and excluded. In many cases the clinician must be satisfied with a probable diagnosis. Valuable time may be lost in attempting to make an exact differential diagnosis. Careful and repeated examinations of the catheterized urine from each kidney show the presence or absence of unilateral or bilateral pyelitis. In the presence of pyelitis, one notes pyuria, bacteriuria and sensitiveness to pressure of the affected kidney or kidneys.

If appendicitis be mistakenly diagnosed ectopic pregnancy or vice versa, the mistake is negligible as both conditions call for immediate surgical relief, the first step of which, in both cases, is abdominal section and inspection and palpation of the existing pathology. Exploratory laparotomy finds here an urgent indication.

When adnexal and appendiceal disease coexist, accurate diagnosis is more difficult. They may be of separate and independent origin or secondary one to the other; the pathological process extending by continuity or contiguity of tissue, or by lymphatic or vascular routes. Vaginoabdominal examination aids in differentiating a diseased appendix from adnexa the seat of inflammatory, cystic or neoplastic changes.

Prognosis. There is no fixed relation between the severity of the symptoms presented by the patient and the existing anatomical lesions; therefore, it is difficult to make an exact preoperative prognosis as to fetal and as to maternal life.

Appendicitis is a dangerous disease. Many cases, apparently mild at the onset, prove fatal. The safety of the mother, be the case acute or chronic, is best assured by an early and immediate removal of the appendix and by noninterruption of gestation. It is universally admitted that early recognition and immediate operation holds forth a far better prognosis for the mother and for the gestation. Generally speaking, the less advanced the gestation, the less likelihood of appendectomy being followed by interruption of pregnancy. Operate, if possible, before the occurrence of suppuration, gangrene or perforation and thereby forestall the

development of serious complications. After the fifth month of pregnancy, the operative difficulties are increased: The uterus occupies the larger part of the abdominal cavity, suppuration is more frequent, adequate drainage is more difficult to secure. "Drainage was necessary; abortion followed two weeks after operation."[2] In the appendicitis of the later periods of gestation, tympanites, when present, interferes more with respiration and intestinal obstruction is of not uncommon occurrence. There is increased vascularity and marked lymphatic dilatation of the peri- and para-appendiceal region; phlebitis and thrombosis are more prone to develop; the pus shows a tendency to burrow more widely and there is less likelihood of encapsulation. The omentum and small intestines in this later period cannot as easily protect the appendix.

During gestation, the prognosis of appendicitis is influenced by many factors. Other factors being equal, the morbidity of this condition is more varied and its mortality higher in the pregnant than in the non-pregnant. The pregnant female is an individual of lessened resistance to infectious and toxemic processes; this lessened resistance is most noticeable in the later periods of pregnancy and in the presence of a virulent infection.

The pregnant uterus reacts unfavorably on the chronically inflamed appendix; likewise, an acutely inflamed appendix may so disturb the pregnant uterus as to induce abortion and thereby subject the patient to the combined morbidity of uterine abortion and appendiceal inflammation. Appendicitis may initiate abortion previous to, during or after the removal of the appendix. The mother and the fetus may live; the fetus may live and the mother die; the fetus may die and the mother live, or both may die; in some cases, the fetus may be dead previous to operation,[32] and in some cases, the mothers have died undelivered.[32]

Abortion may result from infection conveyed to the ovum either by the maternal blood or the lymphatic vessels, by the mucosa and submucosa of one or both tubes and the uterus. Abortion, induced or spontaneous, is always an aggravating factor.

The important difference existing between clinical recovery and anatomical recovery must not be ignored. It is that difference that impels us to advocate early operation. The efforts of the uterus to expel its contents may rupture encapsulated abscesses, tear adhesions limiting the spread of the infection and relight slumbering inflammatory processes. To avoid such disastrous accidents and the general peritonitis resulting therefrom, operate on all your cases of appendicitis, and operate on them early.

There were 32 maternal deaths. They can be attributed to the virulence of the infection, the advanced age of the pregnancy, the late recognition of the disease, the occurrence of abortion and premature labor, and, especially, the tardy and inappropriate surgical relief (8 month pregnancy, operation on 9th day after onset of appendicitis;[25] 7 month pregnancy[36]). The most common cause of death was diffuse peritonitis.[10] Case 26 was in the 8th month of gestation. She was delivered of a living but non-viable six-month infant four weeks after operation and died on the ninety-first postoperative day. One case[36] died on the forty-seventh postoperative day of acute pulmonary edema. In a patient[36] the blood showed, on the fifth postoperative day, streptococci hemolytici. She died on the sixth postoperative day. Some of the thirty-two deaths were due to complicating coexisting conditions: Placenta praevia totalis (child died during delivery)[18] and consequent hemorrhage.

Three hundred and seventy-three patients recovered from the appendicitis and from the operation; they were restored to normal health. In the early months of gestation, a skilfully performed appendectomy is rarely followed by interruption of gestation. Abortion, miscarriage or premature labor are due either to some complication of the appendicitis or to some adventitious cause and may occur irrespective of the operation employed. With the advent of peritonitis or other serious complication, abortion is not improbable. In the latter months, it is difficult to avoid disturbing the uterus, and the operation may contribute to the untimely termination of the pregnancy. Operation does not jeopardize the mother's life; appendicitis does.

In the twenty-one cases of ectopic pregnancy, the products of conception and the appendix were removed at the same operative sitting. In two hundred and five cases, despite the operation, the appendicitis and its complications or sequelae, a living child was born. In eleven

cases, including one[11] in which cesarean section and appendectomy were performed at the same sitting, no mention is made of the state or viability of the child.

Premature labor, the expulsion of a fetus at or after the age of viability, is recorded in seventy-one cases. It may occur on the day of operation, on the day following,[15] several days later or "four weeks after operation."[26] A few were induced by the medical attendant, for syphilis, pelvic contraction, albuminuria,[9, 32] etc. Most always, the premature labor was spontaneous, being due, in part either to the operation, the infection, some associated pathological condition (ovarian cyst;[39] nephritis, pyelitis,[36] etc.), or to the combination of various factors. In almost all of the premature labors, the baby died. "Baby died from apnea;"[12] "infant lived but twelve hours;"[16] "child died after a few respiratory movements."[22] Jerlov[32] records nine living children in fifty-two interrupted gestations following appendectomy.

In ninety-two cases, either abortion or miscarriage followed, earlier or later, the operation. It is most always a clinical manifestation of severe maternal infection and therefore is more frequently observed after late operations and in individuals of lowered resistance. In septic abortion cases, the raw uterine cavity and its thrombosed gaping vessels increase the dangers of spreading infection. Some cases aborted shortly after operation: 12 hours,[30] second day,[5] on the fourth day,[10] five days,[37] others, as long as two weeks,[2] etc. Case 5, eight weeks pregnant, was operated on at one sitting for acute appendicitis and acute gonorrheal salpingitis. She did not wish the gestation to continue. She miscarried after being discharged from the hospital. In case 8, fifteen days after operation, a five-month fetus was expelled. There coexisted an appendicitis and a massive fibroid encircling the lower half of the uterus and extending up to the umbilicus.

Treatment. Be the patient pregnant or non-pregnant, the curative treatment of appendicitis is operative in nature. Palliative measures have a wide field of usefulness, but only as pre- and postoperative adjuvants. We know of no valid contra-indication to operative treatment. Women of child-bearing age who have had one or more attacks of appendicitis non-operatively treated, should, at the earliest possible time, submit to removal of the appendix. A pregnant woman whose metabolism is normal is a good surgical risk.

The importance of early and timely operation cannot be overemphasized. The appendix should be removed before it has ruptured. The earlier the appendectomy, the less advanced the pathology, the greater the probability of the patient's uneventful recovery. It is not possible to foresee the outcome of a non-operatively treated appendicitis, therefore the wisest course is to remove the diseased appendix, if feasible. Delay in operating permits the development of complications that are beyond the control of the surgeon. It has often proven disastrous. In cases of suspected appendicitis, do not wait for a positive diagnosis. When in doubt, you are amply justified in performing an exploratory laparotomy, exposing the appendix and removing it. If a condition amenable to surgical correction is encountered, the exploratory laparotomy is serviceable. The harm resulting from the removal of a healthy appendix is negligible.

Interruption of gestation has no place in the treatment of appendicitis complicating uterine pregnancy. The surgeon should remove the diseased appendix, reduce to a minimum all intra-abdominal manipulations, and see that the gestation be undisturbed. Prolonged traumatizing search for the appendix is to be avoided. Should the delivery of the appendix entail the tearing of protective adhesions and the spreading of the infection, limit the operative procedure to drainage of the appendiceal and other infected regions.

Appendicitis complicating gestation presents to the clinician two paramount indications: The removal of the diseased appendix and the non-interruption of gestation. The attendant should strive to have the pregnancy continue undisturbed. It will not be amiss to tell the patient that, despite the operation, abortion or premature labor may occur, but that it is more probable if the case be treated non-operatively. The probability of cessation of gestation increases with the severity of the infection.

Previous to ascertaining by inspection the nature and extent of the diseased process, one cannot decide what operative procedure is indicated in the case at hand. Operate as rapidly as consistent with the indications and the patient's safety. Reduce all handling of the abdominal organs to a minimum.

If, despite all precautions, postoperative abortion occurs, endeavor to secure the spontaneous emptying of the uterus by tamponade, quinine, pituitrin, etc. Avoid all needless manipulation and instrumentation of the uterus.

Appendectomy is almost always an emergency operation; its technique is simple and easy of execution. Any physician of ordinary experience and skill should be conversant with its performance. When feasible, the center of the incision should correspond to the point of maximal pain and tenderness. We frequently employ the gridiron incision, well to the side. The muscles are split, not cut; thus the abdominal wall is not weakened and is able to withstand the distention incident to pregnancy and the muscular strain accompanying labor.

Septic complications tax the diagnostic and therapeutic skill of the doctor. They prolong convalescence, and often put the already weakened resistance of the patient to a severe test. In complicated cases, the incision must of necessity be longer, the trauma is greater and the postoperative shock more marked than in cases of moderate severity.

Appendicitis occurring within several days of the expected time of labor, influences the obstetrician's choice of method of delivery. It may be necessary to resort to vaginal or abdominal cesarean section. The coexistence of complicating conditions—an exhausted mother, a contracted pelvis, placenta praevia—may require unusual measures.

The removal of the uterus is a needless mutilation and is never indicated in well-managed cases. Hysterectomy, complete or incomplete, is a difficult operation and should not be undertaken by one of limited surgical experience.

The authors refer to drainage in 188 cases: It was used in 119 and omitted in 69 cases. Some operators used cigarette drains,[11] a few, rubber tubing,[12] others, a glass-tube,[13] and many, wicks of gauze. Drainage when indicated is serviceable. It has disadvantages; it has dangers. Its indiscriminate use is to be condemned. The enlarged uterus makes the maintenance of adequate drainage difficult. It must be discontinued as soon as the discharge becomes scanty and serous. The gauze, glass or rubber tubing, cigarette drain, or other agents of drainage should not impinge, should not irritate the uterus. Its use is always indicated in para- and peri-appendicular abscesses, in suppurative peritonitis, localized or diffuse, and whenever the peritoneal exudate is copious. The use of drainage, at times, leads to adhesion formation; intestinal obstruction[14] may result therefrom. Other objections are that it is occasionally followed by a fecal fistula,[15] by a postoperative hernia,[2, 4] etc. If in doubt as to the need of drainage, do not drain.

In 243 cases, the time of operation, with reference to the onset of illness, is not stated. In the remaining 162 cases, it can be tabulated as follows:

Time of operation after onset of illness	Number of cases	Number of maternal deaths	Abortions or premature labor
Within 24 hours	36	1	7
Within 48 hours	35	1	16
Within 72 hours	77	26	43
From the 4th day to the 6th day, inclusive	8	1	1
On 9th day of disease	2	2	2
On 10th day of disease	2	0	0
One month after	2	0	0
Total	162	31	69

The above table demonstrates the importance of early and timely operation from both the maternal and the fetal standpoint. Early operation curtails the morbidity and is rarely followed by death of the mother. Involvement of the internal genitalia in the appendiceal inflammation predisposes to abortion.

The operative procedures resorted to admit of the following tabulation:

IN THE UTERINE PREGNANCIES

	Cases	Deaths	Abortions or premature labors
Appendectomy	373	32	159
Appendectomy and removal of an ovarian tumor	3	0	2
Appendectomy and Cesarean section.	1	0	0
Appendectomy and vaginal section..	1	0	0
Appendectomy and removal of one tube, or of one tube and ovary...	5	0	1
Appendectomy and sub-total hysterectomy	1	0	1
Total	384	32	163

IN THE EXTRA-UTERINE PREGNANCIES

	Cases	Deaths
Appendectomy and removal of fetal sac and tube and ovary of corresponding side at same sitting	20	0
Appendectomy; 7 days later removal of ectopic fetal sac	1	0
Total	21	0

Some of the patients were operated on under local anesthesia, some under splanchnic and local anesthesia combined,[18] others under spinal anesthesia,[23] and almost all were subjected to general anesthesia, such as gas oxygen,[11] ethylene,[24] chloroform[12] and ether.

Most of the cases, with few exceptions, made an uneventful recovery. In one case,[10] the patient aborted on the fourth postoperative day and had a stormy convalescence. "During the twelve weeks of her stay at the hospital, she had pyelitis on both sides, first on the right and then on the left. She had phlebitis in the femoral and popliteal veins, first on the left side, then on the right. She was very ill several times during her long sepsis; but a secondary laparotomy with good nursing and with repeated irrigations of the kidney pelves through urethral catheters, finally saved her. After six months, she has regained her color and her weight and is in perfect health."

58 E. Washington Street.

BIBLIOGRAPHY

1. McGlinn: The Management of the Complications of Pregnancy. N. Y. M. J., 1916, Civ., 248.
2. McLean: Appendicitis in Pregnant Women. Texas State, J. M., 1916, xii, 296.
3. Doyle: Dermoid Cyst of the Ovary with Twisted Pedicle and Acute Appendicitis, Complicating Pregnancy. Am. J. Obst., 1916, lxxiv, 849.
4. Jennings: Appendicitis Complicating Pregnancy. J. Florida, M. A., 1916, iii, 82.
5. Tracy: Gestation Complicated by Appendicitis. Penn., M. J., 1916, xix, 826.
6. Tate: Appendicitis Complicating Pregnancy. Lancet-Clinic, 1916, cxv, 133.
7. Veit: Appendicitis und Schwangerschaft. Med. Klin., 1916, xii, 1, p. 85.
8. Tate: A Case of Pregnancy with Unusual Complications. Am. J. Obst., 1918, lxxvii, 235.
9. Dawes: Report of Three Cases of Appendicitis Complicated by Pregnancy. Illinois, M. J., 1918, xxxiii, 171.
10. Bunch: The Diagnosis of Appendicitis Complicating Pregnancy. J. S. Carolina M. A., 1918, xiv, 256.
11. Cocke & Mason: Management of Acute Appendicitis Developing in Latter Weeks of Pregnancy. J. A. M. A., 1920, lxxv, 1, p. 95.
12. Grattan: Gangrenous Appendicitis Coincident with Labor. Surg., Gynec. & Obst., 1919, xxix, 457.
13. Hoffmann: Bur Frage der Appendicitis in graviditate. Arch. f. Gynaek., 1920, cxii, 230.
14. Buford: Appendicitis Complicating Pregnancy. W. Virginia M. J., 1921, xv, 335.
15. De Lee: Acute Appendicitis in Pregnancy at Term. S. Clinics N. America, 1921, i, 4, 1003.
The Principles and Practice of Obst., 1924, p. 527.
16. Paulus: Case of Five and a Half Months Pregnancy Complicated by Ruptured Appendix with Abscess and Acute Nephritis. J. Oklahoma M. A., 1921, xiv, 14.
17. Couvreux: Traumatisme et gestation. Progrès Médical, 1922, 459.
18. Szenes: Ueber Appendicitis und Peritonitis in graviditate. Arch. f. klin. Chir., 1922, cxx, 859.
19. Favreau et Chaput: Appendicite et gestation. Progrès Méd., 1923, p. 133.
20. Anderson: Acute Appendicitis Complicating Pregnancy. Nebraska M. J., 1923, viii, 102.
21. Gore: Appendicitis during Pregnancy. Southwestern Med., 1924, viii, 383.
22. Pribram: Zur Therapie der Appendicitis waehrend der Graviditaet. Klin. Wchnschr., 1922, i, 1256.
23. Le Filliatre: Appendicite et grossesse extra-utérien. J. de méd. de Paris, 1925, xliv, 140.
24. Ficklen: Appendicitis in the latter Weeks of Pregnancy. New Orleans M. and S. J., 1925, lxxviii, 146.
25. Caplesco: Les troubles digestifs, pendant les premiers mois de la grossess, sont souvent d'origine appendiculaire. Bull. et mém. Soc. nat. de chir., 1925, li, 949. (Rapport de Paul Moure.)
26. Hipsley: A Ruptured Appendix in a Woman Eight Months Pregnant. Med. J. Australia, 1925, xii, 2,400.
27. Stolper: Appendizitis und Graviditaet. Wierner med. Wchnschr., 1925, lxxv, 1 and 2, pp. 1370, 2334.
28. Crosthwait: Appendicitis during Pregnancy. Texas Medical News, 1915-1916, xxv, 337.
29. Richardson: Acute Appendicitis Complicated by Tubal Gestation. Guy's Hosp. Gaz., 1916, xxx, 403.
30. Markoe: Bericht ueber zwei Faelle von Appendizitis als Schwangerschaftskompliqation (Bulletin of the Lying-In Hospital of the City of New-York-Deutsch von Dr. Freudenberg.). Der Frauenarzt, 1918, xxxiii, 186.
31. Brindeau: Appendicite et puerpuralité. La Clinique, 1920, xi, 1.
32. Jerlov: Ueber Appendizitis waehrend der Graviditaet und im Puerperium. Klinische Studie, Helsingfors, 1925, Acta Gynecologica Scandinavica, vol. iv, Fasc. 1.
33. De Gironcoli: Appendicitis, weibliche Genitalorgane, Graviditaet. Deutsche Zeitschrift fuer Chirurgie, 1922, clxxv, 313.
34. Tedenat: Appendicite chez la femme enceinte. Bull. Soc. d'Obst. et de Gynéc. de Paris, 1925, xiv, 237.
35. Lemeland et Risacher: Contracture utérine accompagnant les syndromes péritonéaux et en particulier l'appendicite. Büll. Soc. d'Obst. et de Gynéc. de Paris, 1926, xv, 29.
36. Royston and Fisher: Appendicitis in Pregnancy. Am. J. Obst. and Gynec. 1926, xi, pp. 184, 247.
37. Fullerton: Appendicitis Complicating Pregnancy. Ohio State M. J., 1926, xxii, 124.
38. Mussey: Collected Papers of the Mayo Clinic, 1917, ix, 293.
39. Heineck, A. P.: Personal Cases.

CATARACT

The Choice of Operation for Senile Cataract*

Oscar B. Nugent, M. D.

Prof. of Ophthalmology, Chicago, Eye, Ear, Nose and Throat College.

CHICAGO

Visual results following any form of cataract extraction depends on many factors: the presence or lack of diseased conditions of the eye, the physical condition and age of the patient, the amount of traumatism at the time of operation, the completeness with which the cataract has been removed at the time of operation, and the skill of the operator, all play their part in the final results.

The novice in cataract work usually selects the capsulotomy method because of its simplicity;

*Read before Section on Eye, Ear, Nose and Throat, Illinois State Medical Society, Moline, June 1, 1927.

being willing to risk the chances of secondary cataract and post-operative inflammation, rather than run the risk of vitreous loss which he fears will occur if the intracapsular operation is attempted.

Many experienced operators have given the intracapsular operation a trial without a good understanding of the technique. Some in only a few, others in a great number of cases, with the result that some have entirely discontinued the intracapsular and gone back to the capsulotomy operation; others use the intracapsular method for certain cases only, and still others use it as a routine.

Doubtless each operator has some reason for using the operation of his choice. It may be that he has chosen it from observed experiences of other operators; or it may be a matter of his personal opinion based upon his own past experience. Then again there may not have been any opportunity to learn the various forms of extraction by actual experience or of observing the results obtained from them. The operator therefore continues with the form of extraction of his original choice.

In order to be able to give an unbiased opinion of the value of each form of cataract extraction it is necessary to have a thorough knowledge of the techniques of each form, a clear understanding of the advantages and disadvantages attending each form, and the possible results obtainable therefrom.

The Intracapsular Method: A glance through the literature indicates very strongly that the intracapsular method of extraction is gaining ground over the capsulotomy method. Last year (1926) the percentage of papers for capsulotomy was 43.5% and for intracapsular 56.5%.

From the above it is evident that the trend of opinion in ophthalmology is toward the intracapsular operation and justly so because most every operator, regardless of whether or not he is employing the intracapsular extraction, concedes it to be the operation of choice if successfully performed. In this regard Holland[1] says: "My reasons for changing from the capsulotomy to the intracapsular method were because it was not necessary to wait until the cataracts were ripe and there is less postoperative inflammation; needlings only in some of the burst capsules and in the end, better results are obtained."

Some Points in Cataract Extraction: Let us disregard for a while the forms of cataract extraction and consider the value of a few of the various steps in cataract operation:

1. *Anesthesia:* In recent years deep anesthesia or a more complete anesthesia of both the superfacial and deeper parts has been quite generally accepted. The writer saw clinicians anesthetizing the deep structors of the orbit in almost every clinic in Europe visited. Dumphy[2] of Boston, has mentioned it as a safeguard against vitreous loss. It is also advisable, according to Jacquban,[3] to use it in cases of unruly and nervous patients. Green,[4] Fisher[6] and many others are using it.

Paralysis of the Orbicular Muscles (With Novocain) is of great value to prevent vitreous loss and iris and vitreous prolapse. Barraquer[5] uses it as a routine. Fisher[6] describes it as being of value. Poyales of Madrid,[6] Spain, injects 9cc of a 2% solution of novocain in three different places with good results. Prof. Vila Coro[6] of Barcelona, Spain, after three instillations of 4% cocain at 5 minute intervals and 5 minutes after the last instillation uses one installation of a 50% cocain solution in 1 to 1000 adrenalin solution.

2. *Lid Control:* Fisher,[7] Smith,[18] Green,[8] Obarrio,[9] Vail, Crossley and others have mentioned the value of lid hooks as a measure to avoid vitreous loss.

3. *Dilatation of the Pupil:* This can be accomplished by insertion of an ointment of 5% cocain and 5% eupthalmine[5] between the lids two hours before operation and repeated in one hour. Two hours will usually give sufficient dilation to the pupil so that the lens can be removed through it without iridectomy.

4. *Incision:* The corneal incision is easily made but cannot be conveniently sutured after the operation so as to assist in preventing vitreous loss. The corneo-scleral incision heals much better because it is made in vascular tissue. The corneo-scleral incision with a conjunctival flap is of great value to insure better healing; and, according to Bulson,[10] Green,[40] Fisher,[11] Verhoff,[12] Wordeman,[13] Van Lint,[41] Elschnig,[14] Salva,[16] Jocqs,[15] Barraquer,[5] White,[16] and others,

iris and vitreous prolapse and vitreous loss are lessened by suturing the flap.

5. *Peripheral Iridectomy:* A peripheral iridectomy allows a free flow of aqueous from the posterior to the anterior chamber and it still retains a round pupil. This can be performed just before or after the lens delivery. It would appear from Parker's paper,[17] read before the Ophthalmic section A. M. A. this year, that astigmatism is greater where an iridectomy is performed; he gave percentages as follows: In combined extraction where iridectomy is performed the average degree of astigmation was 2.6 dioptres and in a simple extraction where no iridectomy was performed it was 1.9% dioptres.

6. *Complete Iridectomy:* A complete iridectomy is not necessary in cases where there is a complete or full dilatation of the pupil. It is not necessary for delivery of the lens, except in spoon delivery, and without it the eye is left in a more normal state.

7. *Lens Extraction:* This can be accomplished by expression or traction or by a combination of both. If done with capsulotomy, postoperative inflammation very often follows. Smith,[18] Fisher,[18] Holland,[18] Barraquer,[18] Wright[18] and others maintain that a burst capsule is a complication and tends to lessen visual acuity and causes post-operative inflammation. If then a burst capsule which is left in the eye after operation is a complication in intracapsular operations, then it should also be considered a complication in the capsulotomy operation. Schirner,[19] Uhlenhuth,[20] Krauss, Doerr and Lohma,[21] Lagrange and Lacosta,[22] Straub,[23] Fisher,[7] Verhoff and Lemoine,[24] Lemoine and Macdonald,[25] Gifford,[26] Holland,[27] Nugent[28] and others have emphasized the dangers of retained cortical following cataract extraction. Postoperative cataract often occurs when the capsule is retained, due to the fact that the growth originates from the cells in the anterior capsule.

8. *Intracapsular Extraction.* Extraction by expression without capsulotomy can be performed with or without iridectomy. If the pupil is sufficiently dilated, expression can be performed without iridectomy of any sort, but it is better to perform a peripheral iridectomy for reasons above stated. This operation is of great advantage, because of the round, central, active pupil which results.

Extraction by traction can be accomplished with forceps, as described by Knapp,[30] or suction, (Barraquer,[5]) (Green[40]) and either with or without peripheral or complete iridectomy.

Extraction by a combination of traction and expression can be accomplished both when traction is produced by forceps or suction and is an ideal method of cataract extraction. The writer performed 137 extractions in Holland's clinic, Shikarpur, India, by the combination of suction and expression with the following results:

Loss of vitreous—2 or 1.5%.
Failure due to slipping of erisifaco—2 or 1.5%.
Ruptured Capsule,—4 or 3%.

Results of Different Methods of Extraction: In 1914 Dr. W. A. Fisher reported twelve intracapsular operations with an average visual result of 20/25; next year in 1915, he reported fifty intracapsular[32] operations with good results; again a little later he reported ninety-four[33] consecutice intracapsular operations with equally good results. Cruickshank[34] reported percentages of non-improvement by the intracapsular method at 5.5% and by the capsulotomy method at 9/9%; he[35] also reports 92% good visual results in his report of 115 cataract operations by the Barraquer method with only 3% unsuccessful cases due to accidents during the operation. Hartshorne[36] reports nine cases operated on by facoerisis with visual results from 20/15 to 20/40. Woodruff reported his first six cases as successful. Greeves[37] and Moore each reported a series of cases performed by the Barraquer method with fair results. Howard[38] of Pekin says: "It must be admitted that intracapsular extraction entails greater danger from loss of vitreous than does the old classic type of operation. Yet the results of the former in uncomplicated cases are so immediately good that one feels constrained to do it whenever possible." Elschnig[39] says: "I do feel that I am justified now in saying that the Barraquer operation is by far the best method of extraction within the capsule. The writer visited Dr. Elschnig at his clinic in Prague last December and watched him operate. His routine is the intracapsular operation. In Holland's clinic in India, the largest operative eye clinic in the world, the intracapsular method of extraction is performed as a routine. And among other operators whom the writer personally knows who

do the intracapsular operation for senile cataract as a routine are Smith of London, Barraquer and Vila Coro of Barcelona, Spain, Green of San Francisco, Knapp of New York, Fisher of Chicago, Poyales of Madrid, Spain, Millett of Dayton, Vail of Cincinnati, and others.

CONCLUSIONS

It is my conviction that the following outline of operative procedure is the highest type of surgical technique for the purpose of producing the best surgical and clinical results for all forms of senile cataract.

Anesthesia: Instiliations of 4% solution of cocain at 5 minute intervals for corneal anesthesia and deep intraorbital injections of novocain for anesthesia to the deeper parts; or 50% cocain in 1 to 1000 adrenelin solution, according to Vila Coro.

Pupil Dilatation: By the use of an ointment of 5% cocain and eupthalmine two hours before operation.

Lid Control: Lid Hooks held by a trained assistant.

Incision: Corneo-scleral with conjunctival flap.

Iridectomy: Peripheral iridectomy for the purpose of preventing iris prolapse.

Lens Extraction: The lens should be extracted in capsule through a well dilated pupil. The method of extraction can be either by expression or traction, (forceps or suction) or a combination of both.

Toilet: Suturing of the conjunctival flap and use of 1% eserin ointment. Also suturing of the lids.

Dressings: Light dressings without pressure.

BIBLIOGRAPHY

1. H. T. Holland: One hundred cataract operations performed in one day at Shikarpur, Sind, India. Arch. of Ophthalmology, March, 1924.
2. E. B. Dumphy: Loss of vitreous in cataract extraction. J. A. M. A. Pre-sectional report, 1927.
3. Jacquean—Bujedon: Orbital anesthesia in the cataract operation. Arch. of Ophthalmology, Paris, 1916, xliii, 182.
4. John Green: The Intracapsular Expression of Cataract. Arch. of Ophthalmology, 1922.
5. I. Barraquer: Fisher's book "Senile Cataract," Chicago Eye, Ear, Nose and Throat College, 1923.
6. W. A. Fisher: Facoerisis. Ill. Med. Jour, Feb., 1927.
7. W. A. Fisher: A New and Safe Technique for the Cataract Operation. Ophthalmology, July, 1915.
8. John Green: Safeguards in Cataract Extraction, J. A. M. A., 1926, 87, 392.
9. P. Obarrio. Lid Retraction, the greatest safeguard against vitreous loss in cataract operation. Am. Jour. of Ophthalmology, 1916, ix, 264.
10. A. M. Bulsom: Prolapse of Iris after Cataract Operation. J. A. M. A., 1925, 85, 323.
11. W. A. Fisher: Facoerisis, Ill. Med. Jour., Feb. 1927, 1948.
12. Verhoeff: Sclero Corneal suture in cataract operation, Am. Jour. of Ophthalmology, 1925, 8, 886.
13. Wurdemann: Suturing of Conjunctiva in cataract operation. Northwestern Medicine, 1925, 24, 22.
14. Elschnig, A.: Suture in operation for Senile Cataract, Klin. Monats f'Augenh, 1926, 76, 30.
15. Jocqs: Extraction of cataract. Clin. Ophth., 1925, xxix: 249.
16. White: Treatment of cataract. Virginia Med. Mo., 1925.
17. Parker: Comparative results obtained by the combined, simple and Knapp-Torok method of procedure. Presectional report, A. M. A., 1927.
18. Smith, Fisher, Holland, Barraquer, Wright: Fisher's Book "Senile Cataract." Chicago Eye, Ear, Nose and Throat College, 1923.
19. Schirner: Ueber benigne Post Operative Cyclitis auf Infectioses Basis Cong. Internat. Ophthalmologic, Utrecht. 1899, 402.
20. Uhlenhuth: Zur Lehra von der Unterscheidung Verscheiderer. Eiwcis sortem mit Hilfe Spezifische Sera Koch Festsschrift, 1902. 49.
21. Krauss, Doerr and Sohma: Wien Klin. Wochens., 1908, xxi, 1084. L. 610, 53, W. 635.
22. Lagrange and Lacosta: Operation de la Catracte. Orchives d'Ophthalmol., 1911, xxx, 769.
23. Straub: Ober Outslekingen door Oplessing Van Lensmassa, Amsterdam, 1919.
24. Verhôff and Lemoine: Hypersensitiveness to Lens Protein. Tr. Int. Ophth. Cong., 1922, 234.
25. Lemoine and Macdonald: Observation in Phacoanaphylactic Endopthalmitis. Arch. Ophth. 53 101-118, March, 1924.
26. Gifford: Immune reaction to Lens Protein, J. A. M. A., August, 1925.
27. Holland, Fisher and Holland: 1455 Cataract Operations, Eye, Ear, Nose and Throat Monthly, January, 1925.
28. Nugent: Endopthalmitis Phacogenetics. American Journal Ophthalmology, Sept., 1926.
29. E. Kalt: The results of Lens Extraction in the Cataract Operation. Ann d'ocul-1925, 162-489.
30. Knapp, A.: Late results of intracapsular cataract extraction. Trans. Ophth. Soc. United Kingdom, 1925, xlv, 117.
31. W. A. Fisher: Twelve consecutive intracapsular operations and the visual results. Ophthalmology, January, 1915.
32. W. A. Fisher: Fifty consecutive intracapsular operations. Annals of Ophthalmology, Oct., 1916.
33. W. A. Fisher: Ninety-four consecutive intracapsular cataract operations. Jour. Ophth. and Oto-Laryngology, Aug., 1916.
34. Cruickshank: Observations on the complications following 1,322 consecutive cases of cataract extraction. Indian Medical Gazette, Oct., 1923.
35. Cruickshank: Facoerisis. Observation on the technique with a report on 115 consecutive cases. British Jour. of Opth., July, 1915.
36. Hartshorne: Recent progress in the treatment of cataract of interest to the general practitioner. Amer. Medicine, January, 1926, P. 17.
37. A. R. Greeves and Foster Moore: Cataract Extraction, Lancet, 1925, Vol. 1, P. 897.
38. Howard: Conclusions concerning a Sclero-conjunctive suture in cataract extraction. Presectional report J. A. M. A., 1924.
39. Elschnig: Extraction of Senile Cataract in the Capsule. Amer. Jour. of Ophthalmology, 1925, viii, 355.
40. Green: The Intracapsular expression of cataract. Arch. of Ophth., 1922.
41. Van Lint: Operation for cataract. Arch. d'Opht.., 1925, xlii, 540.

235 W. Washington St.

A CASE OF PURULENT INFECTION OF THE CHEST: ITS DIAGNOSIS AND TREATMENT*

CHARLES LARKIN CONROY, M. D.,
CHICAGO

The patient, a woman, aged 42, entered St. Francis Hospital, February 26, 1925, with a history that five weeks previously she was taken ill with pain in the lower right chest anteriorly, shortness of breath, temperature and cough. Five days before admission in a severe coughing spell, she became very dyspneic and raised a quantity of greyish purulent material with increased pain in the lower right chest.

Physical examination of the chest showed dull tympany over middle lobe anteriorly and dulness, increased fremitus and many rales posteriorly; distant bronchovesicular breathing. Apparently there was an aspiration pneumonia of the lower lobe, with an abscess either in the middle lobe or in the upper part of the lower lobe. Fluoroscopic examination revealed right lower and middle lobes hazy, right costophrenic and cardiophrenic angles obscured. On March 4 Dr. Conroy aspirated the chest and then under local anesthetic resected a section of the eighth rib in the anterior axillary line, evacuating from 500 to 750 c.c. of thick purulent material. One rubber drain was inserted. She left the hospital March 26 much improved in general health but she still raised the same purulent material, although less in amount.

On August 10 she re-entered the hospital with the history of having had a persistent cough since her previous entry and the raising of blood stained purulent sputum was accompanied by chills and fever. Under local anesthetic the pleura was reopened and some bloody, purulent material evacuated. Three months later she returned to the hospital with the history of having coughed almost continuously since August. The sputum contained long chained steptococci. Bronchoscopy by Dr. G. W. Boot showed considerable muco pus in the trachea and right bronchi but no blood or fistula present. On November 17 the first step of a serial rib resection was done. The anterior one-third of the right sixth, seventh and eighth ribs was resected without entering the pleural cavity. She made a good recovery. She has gained 8 pounds, coughs very little and is much more cheerful. The second step will be carried out very shortly.

*Presentation of Clinical Cases before North Shore Branch Chicago Medical Society, March, 1926.

"TEN COMMANDMENTS FOR THE 'COMMON DOCTOR'"

Thou shalt have no favorites in newspaper correspondents in order to see thy name in print.

Thou shalt not bow down to graft, nor to the image of gold.

Thou shalt hold thy tongue when sued for malpractice, remembering silence is golden and that thy adversary is after thy gold and will get it if thou art not discreet.

Remember the Sabbath day and keep it holy; six days shalt thou labor and on the seventh also, if thou hast an opportunity to do good or the prospect of a good fee.

Honor the fathers of thy profession, that thy days may be long upon the land and thy usefulness lengthened, through the example and achievements of thy fathers.

Thou shalt not sanction adultery nor produce an abortion.

Thou shalt not steal thy brother's patients nor forgive him when he steals thine.

Thou shalt not kill thy brother's opportunity for earning a living, nor murder his chance of usefulness. He, probably, is thy superior.

Thou shalt not bear false witness against thy neighbor, nor speak evil of his good name. His reputation may be better than thine.

Thou shalt not covet the specialist's fee, nor dispute over a division. Let him have all the money; he may think he earned it. You must be content with glory.

—W. W. Brown, Virginia Medical Monthly.

Society Proceedings

INTER-STATE POST GRADUATE ASSEMBLY OF NORTH AMERICA

Kansas City, Mo., October 17-20, 1927
First day, Monday, October 17, 7 A. M.

Diagnostic Clinic (Gynecological), Dr. Irvin Abell, professor of Clinical Surgery, University of Louisville Medical Department, Louisville, Ky.

Diagnostic Clinic (Pediatric), Dr. Alan Brown, Professor of Pediatrics, University of Toronto, Faculty of Medicine, Toronto, Canada.

Diagnostic Clinic (Surgical), Mr. John S. McArdle, F.R.C.S.I., Professor of Surgery, University College, Dublin, Ireland.

Intermission—View Exhibits

Diagnostic Clinic (Pediatric), Dr. McKim Marriott, Dean and Professor of Pediatrics, Washington University School of Medicine, St. Louis, Mo.

Diagnostic Clinic (Gynecological), Dr. William B. Hendry, Professor of Obstetrics and Gynecology, Uni-

versity of Toronto, Faculty of Medicine, Toronto, Canada.

Diagnostic Clinic (Medical), Dr. Edward Strecker, Professor of Nervous and Mental Diseases, Jefferson Medical College, Philadelphia, Pa.

Afternoon Session—1 P. M.

Diagnostic Clinic (Medical), Dr. Otto J. Kauffman, Professor of Medicine, University of Birmingham, Birmingham, England.

GYNECOLOGY AND OBSTETRICS—SYMPOSIUM

The Bleeding Uterus, Dr. Irvin Abell, Professor of Clinical Surgery, University of Louisville Medical Department, Louisville, Ky.

The Significance of Abdominal Pain in Gynecological Conditions, Dr. Wiliam B. Hendry, Professor of Obstetrics and Gynecology, University of Toronto, Faculty of Medicine, Toronto, Canada.

The Modern Trend in Midwifery and Gynecology, Dr. R. P. Ranken Lyle, Professor of Obstetrics and Gynecology, University of Durham, Newcastle-upon-Tyne, England.

(Subject to be announced), Dr. Ersilio Ferroni, Professor of Obstetrics and Gynecology, University of Florence, Florence, Italy.

Intermission—View Exhibits

The Particular Features of Italian Gynecology and Obstetrics, Dr. Luigi Mangiagalli, Dean and Professor of Obstetrics and Gynecology, Royal Clinical Institute, Milan, Italy.

The Mechanism of the Migration of the Ovum and the Etiology of Tubal Pregnancy with Special Reference to the Origin of Indirect Migration, Prof. Pasquale Sfameni, Rector of the Royal University and Director of the Obstetric-Gynecological Clinic, Bologna, Italy.

PEDIATRICS—SYMPOSIUM

The Daily Variation of Sunlight and its Effect on Growth and Resistance to Disease, Dr. Alan Brown, Professor of Pediatrics, University of Toronto, Faculty of Medicine, Toronto, Canada.

The Sequelae of Acute Infectious Diseases in Children with Special Reference to Their Effect Upon the Kidneys, Dr. McKim Marriott, Dean and Professor of Pediatrics, Washington University School of Medicine, St. Louis, Mo.

The Significance of Basal Metabolism in Children, Dr. Fritz B. Talbot, Clinical Professor of Pediatrics, Medical School of Harvard University, Boston, Mass.

(Subject to be announced), Professor Adolphe Maffei, Chief of the Hospital Service and Head of the Surgical Department of the Pediatric Clinic, University of Brussels, Brussels, Belgium.

Evening Session—7 P. M.

The Importance of Examination of the Spine in the Presence of Intrathoracic or Abdominal Pain, Dr. John Phillips, Assistant Professor of Therapeutics, Western Reserve University, School of Medicine; Director, Cleveland Clinic, Cleveland, Ohio.

(Subject to be announced), Mr. John S. McArdle, F.R.C.S.I., Professor of Surgery, University College, Dublin, Ireland.

The Relation of Focal Infections to Certain Systemic Conditions, Dr. Charles H. Neilson, Professor of Medicine, St. Louis University School of Medicine, St. Louis, Mo.

Factors Fundamental to the Healing of Tuberculosis, Dr. Francis M. Pottenger, Monrovia, Calif.

Some Problems in the Etiology of Heart Failure, Sir John F. H. Broadbent, F.R.C.P., London, England.

Poliomyelitis, Dr. Milton J. Rosenau, Professor of Preventive Medicine and Hygiene, Medical School of Harvard University, Boston, Mass.

New Investigations on the Physiology and Chemistry of the Male and Female Hormones, Dr. Sigmund Frankel, Professor of Experimental Medicine, Imperial Royal University of Vienna, Vienna, Austria.

Second Day, Tuesday, October 18, 7 A. M.

Diagnostic Clinic (Surgical), Dr. Arthur Dean Bevan, Professor of Surgery, Rush Medical College, Chicago, Illinois.

Diagnostic Clinic (Medical), Dr. Elliott P. Joslin, Professor of Clinical Medicine, Medical School of Harvard University, Boston, Mass.

Diagnostic Clinic (Pediatric), Dr. Fritz B. Talbot, Clinical Professor of Pediatrics, Medical School of Harvard University, Boston, Mass.

Intermision—View Exhibits

Diagnostic Clinic (Surgical), Dr. William D. Haggard, Professor of Clinical Surgery, Vanderbilt University, School of Medicine, Nashville, Tenn.

Diagnostic Clinic (Surgical), Dr. Dean Lewis, Professor of Surgery, Johns Hopkins University, Medical Department, Baltimore, Md.

Diagnostic Clinic (Surgical), Dr. Nathaniel Allison, Professor of Orthopedic Surgery, Medical School of Harvard University, Boston, Mass.

Afternoon Session—1 P. M.

Diagnostic Clinic (Gynecological), Dr. R. P. Ranken Lyle, Professor of Obstetrics and Gynecology, University of Durham, Newcastle-upon-Tyne, England.

DISEASES OF THE STOMACH—SYMPOSIUM

The Early Diagnosis and Radical Operative Treatment of Carcinoma of the Stomach, Dr. Arthur Dean Bevan, Professor of Surgery, Rush Medical College, Chicago, Illinois.

The Significance of Gastric Hemorrhage, Dr. Frank Smithies, Professor of Medicine, Northwestern University Medical School, Chicago, Illinois.

The Surgical Treatment of Gastric Ulcers, with Special Reference to the Massive Ulcers, Mr. Garnett Wright, F.R.C.S., Honorary Surgeon, Salford Royal Hospital; Lecturer in Surgical Pathology, Victoria University, Manchester, England.

The Relation of Cancer of the Stomach to Ulcer, Dr. Alfred S. Warthin, Professor of Pathology, University of Michigan, Ann Arbor, Mich.

Intermission—View Exhibits

DIABETES—SYMPOSIUM

The Liberation of Insulin and the Relation of this Hormone to the Other Internal Secretions, Dr. C. H. Best, Associate Professor of Medical Research, University of Toronto, Faculty of Medicine, Toronto, Canada.

The Ten Year Diabetic—What He Should Be and How It Can Be Brought About, Dr. Elliott P. Joslin, Professor of Clinical Medicine, Medical School of Harvard University, Boston, Mass.

Hyperthyroidism and Diabetes, Dr. Henry J. John, Cleveland Clinic, Cleveland, Ohio.

Renal Factors in Diabetic Coma, Dr. I. Snapper, Professor of Pathology, University of Amsterdam, Amsterdam, Holland.

The Relation of Focal Infections to Pancreatic Function with Special Reference to the Etiology of Diabetes, Dr. John C. Meakins, Professor of Medicine, McGill University, Faculty of Medicine, Montreal, Canada.

Evening Session—7 P. M.

The Psychoses of Different Age Periods, Dr. Edward Strecker, Professor of Nervous and Mental Diseases, Jefferson Medical College, Philadelphia, Pa.

DISEASES OF THE BONES AND JOINTS—SYMPOSIUM

Early Operation with Early Function in Certain Types of Fracture, Dr. Nathaniel Allison, Professor of Orthopedic Surgery, Medical School of Harvard University, Boston, Mass.

Acute Non-Tuberculous Ilio-Psoas Infections, Dr. Leroy Long, Dean and Professor of Surgery, University of Oklahoma, School of Medicine, Oklahoma City, Oklahoma.

Osteomyelitis, Dr. Dean Lewis, Professor of Surgery, Johns Hopkins University, Medical Department, Baltimore, Md.

Trauma of the Knee-Joint, Dr. John J. Moorhead, Professor of Surgery, New York Post Graduate Medical School, New York, N. Y.

New Ways of Dealing With Fractures and Injuries of Articulations With Special Consideration of Their Functional Treatment (moving pictures), Dr. Fritz Steinmann, Professor of Orthopedic Surgery, University of Berne, Berne, Switzerland.

Third Day, Wednesday, October 19, 7 A. M.

Diagnostic Clinic (Surgical), Dr. Frank H. Lahey, Boston, Mass.

Diagnostic Clinic (Medical), Dr. Charles A. Elliott, Professor of Medicine, Northwestern University, School of Medicine, Chicago, Illinois.

Diagnostic Clinic (Neurosurgical), Dr. A. W. Adson, Associate Professor of Surgery, University of Minnesota, Post-Graduate School of Medicine, Mayo Foundation, Rochester, Minn., and Dr. Harry L. Parker, Consulting Neurologist, Mayo Clinic, Rochester, Minn.

Intermission—View Exhibits

Diagnostic Clinic (Surgical), Dr. Walter E. Dandy, Professor of Clinical Surgery, Johns Hopkins University, Medical Department, Baltimore, Md.

Diagnostic Clinic (Medical), Dr. James H. Means, Professor of Clinical Medicine, Medical School of Harvard University, Boston, Mass.

Diagnostic Clinic (Surgical), Dr. Robert S. Dinsmore, Cleveland Clinic, Cleveland, Ohio.

Afternoon Session—1 P. M.

THYROID GLAND—SYMPOSIUM

The Malignant Thyroid, Dr. Allan Graham, Assistant Professor of Surgery, Western Reserve University, School of Medicine, Cleveland, Ohio.

End Results of Radiation Therapy in the Treatment of Carcinoma of the Thyroid Gland, Dr. U. V. Portmann, Cleveland Clinic, Cleveland, Ohio.

The Technique of Thyroidectomy, Dr. Frank H. Lahey, Boston, Mass.

Iodin in the Management of Goiter Patients, Dr. Clarence G. Toland, Los Angeles, Calif.

Intermission—View Exhibits

Cardiac Disturbances Asociated with Hyperthyroidism, Dr. Charles A. Elliott, Professor of Medicine, Northwestern University, School of Medicine, Chicago, Ill.

Parathyreoprival Tetany, J. B. Collip, Ph.D., D.Sc., Professor of Biochemistry, University of Alberta, Edmonton, Canada.

A New Method of Surgical Treatment of Stenosis of the Larynx, Professor E. Schmiegelow, Professor of Otolaryngology, University of Copenhagen, Copenhagen, Denmark.

Tabetic Atrophy of the Optic Nerves, Professor Carl Behr, Hamburg, Germany.

Pernicious Anemia With Special Reference to Treatment With High Protein Diet, Dr. Clarence M. Grigsby, Professor of Medicine, Baylor University, Dallas, Texas.

Evening Session—7 P. M.

Vagaries of Skin, Sir John Bland-Sutton, F.R.C.S., London, England.

CANCER—SYMPOSIUM

The Danger of Incomplete Removal of Small and Apparently Innocent Lesions, Dr. Joseph C. Bloodgood, Associate Professor of Clinical Surgery, Johns Hopkins University, Medical Department, Baltimore, Md.

The Treatment of Laryngeal Carcinoma, Dr. Fielding O. Lewis, Professor of Laryngology, Jefferson Medical College, Philadelphia, Pa.

The X-ray Treatment of Epithelioma of the Face, Dr. James M. Martin, Professor of Roentgenology, Baylor University, College of Medicine, Dallas, Texas.

INTESTINES—SYMPOSIUM

Appendicitis, Dr. Jabez Jackson, President, American Medical Association, Kansas City, Mo.

The Management of Acute and Sub-Acute Intestinal Obstruction, Dr. William D. Haggard, Professor of Clinical Surgery, Vanderbilt University, School of Medicine, Nashville, Tenn.

The Mechanism of the Physiological Cecal Block

and a Suggestion of a Simple Surgical Treatment, Dr. Rea E. Smith, Los Angeles, Calif.

Fourth Day, Thursday, October 20, 7 A. M.

Diagnostic Clinic (Medical), Dr. Harlow Brooks, Professor of Clinical Medicine, University and Bellevue Medical College, New York, N. Y.

Diagnostic Clinic (Medical), Dr. Leonard G. Rowntree, Professor of Medicine, University of Minnesota, Post-Graduate School of Medicine, Mayo Foundation, Rochester, Minn.

Diagnóstic Clinic (Surgical), Dr. William E. Lower, Associate Professor of Genito-Urinary Surgery, Western Reserve University, School of Medicine; Director, Cleveland Clinic, Cleveland, Ohio.

Intermission—View Exhibits

Diagnostic Clinic (Surgical), Dr. Joseph C. Bloodgood, Associate Professor of Clinical Surgery, Johns Hopkins University, Medical Department, Baltimore, Md.

Diagnostic Clinic (Medical), Dr. David P. Barr, Professor of Medicine, Washington University, School of Medicine, St. Louis, Mo.

Diagnostic Clinic (Laryngological), Dr. Fielding O. Lewis, Professor of Laryngology, Jefferson Medical College, Philadelphia, Pa.

Afternoon Session—1 P. M.

Diagnostic Clinic, Dr. Hugh Cabot, Dean and Professor of Surgery, University of Michigan, Medical School, Ann Arbor, Michigan.

THE LUNGS AND BRONCHI—SYMPOSIUM

The Treatment of Pneumonia, Dr. Harlow Brooks, Professor of Clinical Medicine, University and Bellevue Medical College, New York, N. Y.

The Significance of Certain Abnormalities of Respiration, Dr. David P. Barr, Professor of Medicine, Washington University, School of Medicine, St. Louis, Mo.

The Role of Bronchoscopy in the Diagnosis and Treatment of Diseases of the Lungs, Dr. Gabriel Tucker, Associate Professor of Bronchoscopy and Esophagoscopy, Graduate School of Medicine of the University of Pennsylvania, Philadelphia, Pa.

Bronchospirochetosis, Dr. Guiseppe Franchini, Professor of Pathology, Royal University of Bologna, Bologna, Italy.

Intermission—View Exhibits

URINARY SYSTEM—SYMPOSIUM

Silent Lesions of the Upper Urinary Tract, Dr. William E. Lower, Associate Profesor of Genito-Urinary Surgery, Western Reserve University, School of Medicine; Director, Cleveland Clinic, Cleveland, Ohio.

Infections of the Urinary Tract, Dr. Hugh Cabot, Dean and Professor of Surgery, University of Michigan, Medical School, Ann Arbor, Michigan.

Transplantation of the Ureters, Dr. Robert C. Coffey, Portland, Oregon.

Evening Session—7 P. M.

The Combat Against Leprosy, Dr. Paul Unna, Hamburg, Germany.

The Other Page of the Ledger—Mortality in Operations, Dr. John F. Erdmann, Professor of Surgery, New York Post-Graduate Medical School, New York, N. Y.

(Subject to be announced), Dr. J. Marinho, Professor of Clinical Oto-Rhino-Laryngology, Rio de Janeiro, Brazil.

(Subject to be announced), Dr. Charles H. Mayo, Professor of Surgery, University of Minnesota Medical School, Rochester, Minn.

BRAIN AND CENTRAL NERVOUS SYSTEM—SYMPOSIUM

The Results of Sympathectomy in the Treatment of Raynaud's and Buerger's Disease, Dr. A. W. Adson, Associate Professor of Surgery, University of Minnesota, Post-Graduate School of Medicine, Mayo Foundation, Rochester, Minn.

Anatomy and Clinical Importance of the Ear Findings in the Neurological Symptom Complex, Dr. Gustav Alexander, Professor of Diseases of the Ear, University of Vienna, Vienna, Austria.

The Treatment of Tic Douloureux, Dr. Walter E. Dandy, Johns Hopkins University, Medical Department, Baltimore, Md.

Fifth Day, Friday, October 21, 7 A. M.

Diagnostic Clinic (Surgical), Dr. E. Starr Judd, Professor of Surgery, University of Minnesota, Post-Graduate School of Medicine, Mayo Foundation, Rochester, Minn.

Diagnostic Clinic (Medical), Dr. Frederick J. Kalteyer, Associate Professor of Medicine, Jefferson Medical Colloge, Philadelphia, Pa.

Diagnostic Clinic (Surgical), Dr. George W. Crile, Professor Emeritus of Surgery, Western Reserve University, School of Medicine; Director, Cleveland Clinic, Cleveland, Ohio.

Intermission—View Exhibits

Diagnostic Clinic (Surgical), Dr. Charles H. Mayo, Professor of Surgery, University of Minnesota Medical School, Rochester, Minn.

Diagnostic Clinic (Medical), Dr. Lewellys F. Barker, Emeritus Professor of Medicine, Johns Hopkins University, Medical Department, Baltimore, Md.

Diagnostic Clinic (Surgical), Dr. John B. Deaver, Emeritus Professor of Surgery, University of Pennsylvania Medical School, Philadelphia, Pa.

Afternoon Session—1 P. M.

Diagnostic Clinic (Surgical), Dr. John F. Erdmann, Professor of Surgery, New York Post-Graduate Medical School, New York, N. Y.

GALL-BLADDER AND LIVER—SYMPOSIUM

The Surgical Treatment of Diseases of the Biliary Tract, Dr. E. Starr Judd, Professor of Surgery, University of Minnesota, Post-Graduate School of Medicine, Mayo Foundation, Rochester, Minn.

The Significance of Jaundice, Dr. John B. Deaver, Emeritus Professor of Surgery, University of Pennsylvania, Medical School, Philadelphia, Pa.

Relation of the Liver to the Surgical Risk in Cases of Gall-Bladder and Duct Disease, Dr. George W.

Crile, Professor Emeritus of Surgery, Western Reserve University, School of Medicine, Director, Cleveland Clinic, Cleveland, Ohio.

The Physiology of the Liver and Gall-Bladder, Dr. Frank C. Mann, Professor of Experimental Surgery and Pathology, University of Minnesota, Post-Graduate School of Medicine, Mayo Foundation, Rochester, Minn.

Present Knowledge Concerning Tests of Liver Function, Dr. Leonard G. Rowntree, Professor of Medicine, University of Minnesota, Post-Graduate School of Medicine, Mayo Foundation, Rochester, Minn.

Differential Diagnosis of Diseases of the Gall-Bladder, Dr. David Riesman, Professor of Clinical Medicine, University of Pennsylvania, School of Medicine, Philadelphia, Pa.

HEART AND CIRCULATORY SYSTEM—SYMPOSIUM

Coronary Thrombosis—Incidence, Prevention and Treatment, Dr. Lewellys F. Barker, Emeritus Professor of Medicine, Johns Hopkins University, Medical Department, Baltimore, Md.

Angina Pectoris, Dr. Frederick J. Kalteyer, Associate Profesor of Medicine, Jefferson Medical College, Philadelphia, Pa.

Relation of the Endocrines to Certain Circulatory Diseases, Dr. James H. Means, Professor of Clinical Medicine, Medical School of Harvard University, Boston, Mass.

Gastro-Intestinal Auto-Intoxication as a Factor in Nervous Disorders, Dr. Otto J. Kauffman, Professor of Medicine, University of Birmingham, Birmingham, England.

Marriages

NELSON HOLE CHESTNUT, Mason City, Ill., to Miss Mildred Holland of New Holland, July 19.

ARTHUR HOBART CONLEY to Miss Josephine Marie Hay, both of Chicago, July 20, at Montreal, Que., Canada.

ROBERT W. ELWORTHY to Miss Florence Hediger, both of Chicago, June 9.

ROY M. MONTFORT to Miss Harriette E. Smith, both of Danville, Ill., July 6.

KENNETH NORMAN PETRI to Miss Esther Hoeflin, both of Washington, Ill., June 23.

WILMIER M. TALBERT to Miss Mary Louise Henry, both of Decatur, Ill., July 2.

Personals

Dr. Allan Craig, associate director of the American College of Surgeons, has resigned.

Dr. Herman M. Adler will give an address during the annual meeting of the American Bar Association, Buffalo, August 30, on "Biologic and Pathologic Aspects of Behavior Disorders."

Dr. Jesse L. McElroy, who recently resigned as superintendent of the University Hospital, Iowa City, has been appointed superintendent of St. Luke's Hospital, Chicago, to succeed Dr. Charles H. Pelton, who goes to Montefiore Hospital, Pittsburgh. Dr. McElroy assumed his new duties July 15.

Dr. Charles C. Rentfro of Chicago sailed on SS. Republic last month with Mrs. Rentfro and twin daughters for a study tour in Europe. After a visit to the Rotunda maternity hospital in Dublin, he planned a trip to Edinburgh. It seems probable that he will investigate the theory of the genesis of twins promulgated by Prof. Crowe of Edinburgh recently at Geneva.

Dr. Joseph L. Miller of Chicago gave an address on "Medical Aspect of Gall Bladder Disease" before the Lee and Ogle County Society meeting at Lowell Park, August 18. Dr. Arthur Dean Bevan presented the subject of "Surgical Aspects." Both addresses were illustrated by lantern slides. Dr. W. B. Peck of Freeport reviewed the coming International meeting of the Interstate Post Graduate Assembly. The meeting in Lowell Park was in picnic style and has been an annual affair since 1921. The beauty of the park and the excellence of the programs always draw a large attendance.

Dr. H. C. Tietze, who for eight years has made his home in Livingston, is planning to make his home in Edwardsville. He will occupy the suite of offices recently occupied by Dr. E. W. Fiegenbaum.

Thomas Williamson has been elected president of the Edwardsville Rotary Club to succeed the late Dr. Fiegenbaum.

Dr. J. H. Wedig of Granite City has been attending surgical clinics at Chicago.

Dr. Mather Pfeiffenberger with a party of friends is on vacation at the Jackson Hole country near Yellowstone Park.

Dr. H. P. Reuss of Granite City was the winner in the annual golf tournament held at the Madison County Country Club.

Dr. and Mrs. R. D. Luster, Granite City, are touring Colorado and other western points. They expect to return in about six weeks.

News Notes

—The Scientific Service Committee will schedule speakers for medical meetings in Illinois. A guaranteed attendance is not required by the Committee.

—The Adams County Medical Society, Quincy, plans an all day meeting for November 14. Three prominent physicians will be the guests of honor.

—The meeting place of the Jackson Park Branch of the Chicago Medical Society will be at the new Albert Merritt Billings Hospital of the University of Chicago at Ellis Avenue on the Midway.

—The state department of health is preparing a health history of Illinois which will be ready for distribution in October at the semicentennial of the founding of the public health service of the state at Springfield; the history is being edited by Dr. William A. Evans, Chicago.

—A health center is to be established in Des Plaines to serve the northwest section of the county; it will be maintained by county appropriations and will be under the jurisdiction of the county board and the county health director, Dr. Herbert L. Wright, Berwyn.

—Under the auspices of the Chicago Heart Association, a group of about 350 cardiac patients taken from various Cook County Clinics left, July 18, for a summer vacation at Camp Reinberg, Palatine, Ill. The Cook County commissioners are said to have afforded the accommodations for the patients, and to have gradually increased the facilities annually since 1922 from ninety beds to 350.

—The Peoria County Medical Society held its annual picnic, July 21, at the North Shore Country Club, Peoria. A program of sports, including golf, swimming and races, was provided. Following the basket dinner in the evening, a moving picture was presented. Prizes were given to winners of the various contests. Dr. G. Henry Mundt, Chicago, president of the state medical society, gave an address.

—During the first six months of this year, there were fifty-three cases of typhoid and eight deaths in Chicago, whereas in the same period last year, there were forty cases and four deaths, and in the corresponding period of 1925, 103 cases and twenty-one deaths. The Chicago Department of Health, June 30, had on record forty-six typhoid carriers in the city. The typhoid record last year was the lowest in the history of the city.

—The board of trustees of the University of Chicago announce the promotion to full professorship in pathology of William H. Taliaferro, Ph. D.; to associate professorship in pathology of Maude Slye, and to associate clinical professorships at Rush Medical College of Dr. Joseph L. Baer in obstetrics and gynecology, Dr. Edward A. Oliver in dermatology, and Dr. William G. Reeder in ophthalmology. John F. Norton, Ph. D., has been appointed secretary of the department of hygiene and bacteriology, and Warder C. Allee, Ph. D., secretary of the department of zoology. Arthur H. Compton, Ph. D., professor of physics, has been granted a leave of absence from October 1 to November 10 in order that he may attend the Solday Congress.

—Two days previous to the annual Illinois Conference on Public Welfare, October 17-18, courses of study will be given for social workers and others concerned with social work. There will be five courses each, consisting of four sessions and costing $3. Enrollment in each course will be limited, and no one can take more than two courses. Among the instructors will be Dr. Herman M. Adler, director, Institute for Juvenile Research, Chicago, and other instructors who are officers of various national organizations engaged in public welfare work. The subjects of the courses will be: (1) problems of admission, placement and discharge by child-caring institutions and agencies; (2) probation methods; (3) administration of mothers' pensions; (4) mental factors in social case work, and (5) fundamental principles of social case work. Inquiries should be addressed to the chairman, 848 North Dearborn Street, Chicago.

—With the cooperation of the Decatur Medical Society and the local school authorities, the health department of Decatur and the state department of health conducted a thyroid survey of the school children of that city. It was desired to determine the prevalence of thyroid enlargement among the school children, and to

learn whether it was more prevalent in Decatur where the city water was free of iodine than it is in other places where the water supply contains iodine. The survey began February 14 and continued for seven days, and a total of 10,055 pupils was examined. Of this number, 5,338, or 53 per cent, showed some degree of thyroid enlargement; in 36 per cent it was "very slight"; in 15 per cent "slight"; in 0.1 per cent "severe," and in 0.04 per cent "very severe." The fifth grade school children had the largest percentage of normal thyroids; the senior grade the second largest percentage of normal thyroids. The severe and very severe enlargements were most prevalent in the junior grades. The more marked enlargements, as a rule, were found in the higher grades, according to Dr. William S. Keister, the former city health officer, although all grades showed a high percentage of very slight enlargements. Among the white boys and girls, who totaled 9,682, 53.2 per cent showed some degree of thyroid enlargement. Among the colored boys and girls, who totaled 373, 51.2 per cent had some degree of thyroid enlargement. Among the boys, both white and colored, who totaled 5,009, 46.5 per cent showed some degree of thyroid enlargement and among the 5,046 girls, both white and colord, 59.6 per cent showed some degree of thyroid enlargement. Dr. Keister says in the *Illinois Health News* that from these figures it appears that neither color nor sex seems to have a marked influence on the prevalence of enlarged thyroids.

Deaths

James Henry Abrams, Atwood, Ill.; Rush Medical College, Chicago, 1878; aged 77; died, July 2, of cerebral hemorrhage.

Paul Ackermann, Chicago; Chicago College of Medicine and Surgery, 1910; aged 55; died, July 19, of chronic myocarditis.

William Henry Bellinger, Peoria, Ill.; Rush Medical College, Chicago, 1895; a Fellow, A. M. A.; aged 56; died, August 5, of heart disease.

James Henry Blair, Lombard, Ill.; Bennett College of Eclectic Medicine and Surgery, Chicago, 1897; aged 56; died, July 16, of cirrhosis of the liver.

William Carter Griswold, Princeton, Ill.; Chicago Medical College, 1864; Civil War veteran; aged 87; died, July 20, of senility.

George Whitefield Johnson, Savanna, Ill.; University of Michigan Medical School, Ann Arbor, 1863; Harvard University Medical School, Boston, 1865; Civil War veteran; local surgeon, C., M. & St. P. and C., B. & Q. R. R.; aged 83; died at Savanna City Hospital, July 25, of cerebral hemorrhage.

Albert Charles Kubicek, Chicago; Bennett College of Eclectic Medicine and Surgery, Chicago, 1899; a Fellow, A. M. A.; University of Illinois College of Medicine, Chicago, 1901; formerly professor of surgery and surgical anatomy at Bennett Medical College; on the staff of Cook County Hospital; aged 50; died, July 24, of a self-inflicted bullet wound, while suffering from pneumonia.

Bird McPherson Linnell, Chicago; Rush Medical College, Chicago, 1893; a Fellow, A. M. A.; associate clinical professor of medicine at his alma mater; served in the army, during the World War; for many years an officer of the Illinois National Guard; formerly on the staffs of the Evangelical Deaconess, Cook County, Chicago General and the Presbyterian hospitals, where he died, August 18, of arthritis and heart disease, aged 61.

James Duke Lyness, Savanna, Ill.; Trinity Medical College, Toronto, Ont., Canada, 1901; a Fellow, A. M. A.; aged 58; was found dead in bed, August 4, of heart disease.

Lemuel Pinckney Peters, Clayton, Ill.; Keokuk (Iowa) Medical College, 1905; a Fellow, A. M. A.; aged 49; died suddenly, July 18, of heart disease.

Climena Serviss, Chicago; Hahnemann Medical College and Hospital, Chicago, 1896; aged 73; died, July 2, of chronic myocarditis.

William C. Spangengberg, Chicago; Rush Medical College, Chicago, 1902; a Fellow, A. M. A.; formerly associate professor of gynecology, General Medical College, Chicago; aged 48; died in July, of carcinoma of the liver.

William T. Warren, Chicago; Bennett College of Eclectic Medicine and Surgery, Chicago, 1903; aged 62; died, July 29, of septicemia.

Joseph William Weis, Manchester, Ill.; Hahnemann Medical College and Hospital, Chicago, 1872; aged 77; died, July 3, of cerebral hemorrhage.

Edward William Fiegenbaum, Edwardsville, Ill.; Bellevue Hospital Medical College, New York, 1876; a Fellow, A. M. A.; member of the House of Delegates of the American Medical Association, 1913, 1926 and 1927; past president of the Illinois State Medical Society; secretary and past president of the Madison County Medical Society; for many years member of the school board; aged 73; died, July 28, of heart disease.

Andrew J. Hedgcock, Decatur, Ill.; Northwestern University Medical School, Chicago, 1915; member of Illinois State Medical Society; Fellow A. M. A.; served in the Navy duringg the World War; member of staff of Decatur, and Macon County Hospital; aged 40; died, August 16, 1927, at Rochester, Minnesota, following an operation for gall stones.

1927

Civil
., B.
pital,

llege
9; a
e of
gery
; on
July
from

edical
ciate
rved
years
y on
unty,
here
aged

dical
. M.
4, of

okuk
A.;

dical
died,

edical
nerly
Col-
na of

ge of
aged

ahne-
1872;

Ill.;
1876;
Dele-
1926
edical
dison
er of
heart

estern
er of
erved
staff
l 40;
llow-